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ABSTRACT

This report compares the educational attainment and present attitudes of young black adults who did and did not participate in a program that allowed inner-city students to attend suburban schools. The desegregation program, Project Concern in Hartford, Connecticut, began in 1966 by randomly selecting one group of students to be offered the opportunity to attend suburban schools and a second group as controls. Both groups, along with other Project Concern participants, were traced. In 1982, some 700 students and their parents were surveyed, after they had finished secondary school. It was concluded that attending suburban schools reduced high school dropout rates, increased adult contacts with whites socially, and increased the number of blacks choosing to live in interracial housing. Male participants had fewer difficulties with police, perceived less discrimination in colleges and in employment, and were more likely to succeed in college. Female participants were less likely to have a child before age 18. It seems likely that, for a male, the chance of obtaining 2 or more years of college was at least one and one-half times greater if he received a desegregated education. Appendix A discusses data collection methodology, and Appendix B is an analysis of self-selection and response bias. (Contains 12 tables, 7 appendix tables, and 28 references.) (Author/SLD)

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FINDING NICHES: DESEGREGATED STUDENTS SIXTEEN YEARS LATER

Final Report on the Educational Outcomes of
Project Concern, Hartford, Connecticut

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PREFACE

This report was originally drafted while the senior author was with the Rand corporation. He left Rand in 1985, and the report was not released until 1992. While it now should be cited as available from Teachers College, it has in the past been cited as available from the Rand Corporation.

This Report is an analysis of the effects of a desegregation experiment begun in 1966 in Hartford, Connecticut. The project was a joint effort of The Rand Corporation and the Center for Social Organization of Schools at Johns Hopkins University. Rand's work was funded by a grant from the National Institute of Education; The Center's contribution was funded through its NIE-sponsored Research and Development Center.

This report describes the effect of desegregation on black student educational attainment, attitudes about race relations, difficulties with the police, contact with whites, and for women, childbirth before age 18.

A companion report, from The Center for Social Organization of Schools, R. Crain and J. Strauss, "School Desegregation and Black Occupational Attainment: Results from a Long-Term Experiment," describes the effect of desegregation on occupational success.

ABSTRACT

This report compares the educational attainment and present attitudes of young black adults who did and did not participate in a program which allowed inner-city students to attend suburban schools. The desegregation program--Project Concern in Hartford, Connecticut--began in 1966 by randomly selecting one group of students to be offered the opportunity to attend suburban schools and a second group as controls. Both groups, along with other Project Concern participants, were traced and they and their parents surveyed in 1982, after they had finished secondary school.

We concluded that attending suburban schools reduced high school dropout rates, increased adult contacts with whites socially, and increased the number of blacks choosing to live in interracial housing. Male participants had less difficulties with police and perceived less discrimination in colleges and in employment. Female participants were less likely to have a child before age 18.

Desegregated male students are considerably more likely to succeed in college--it is unwise to attempt an exact estimate, but it seems very likely that for males, the chance of obtaining two or more years of college are at least one- and one-half times greater if he received a desegregated education.

SUMMARY

This study reports on a long-term study of the effects of racial desegregation of schools, based on the tracing of students initially involved in a 1966 desegregation plan. This is the first study ever done which follows a group of desegregated students from their first desegregation in elementary school until after high school graduation. The study has the advantage of being based on a randomized experiment. In 1966, a randomly selected group of students, nearly all black, living in low-income areas in Hartford, Connecticut, were offered the opportunity to attend school in a dozen virtually all-white suburban districts. In later years, more students volunteered for the program, some having been randomly sampled and others not. In our research, we identified control groups for these various sets of desegregated students and traced the students to the present, when all had finished their secondary schooling. We have followed every student in the experiment, including those who quit the desegregated schools and returned to Hartford and even those who were selected but never entered the program. Doing this provided an unusually rigorous research design. Some 700 parents and/or students were located and interviewed with a telephone survey.

The analysis drew six conclusions:

1. Male participants were more likely to graduate from high school. This is probably true for females as well, but the effect on females is weaker.
2. Male participants completed more years of college. (This is not true for females.)
3. Male participants perceive less discrimination in college and in other areas of adult life in Hartford (not true for females).

4. Male participants have experienced less difficulty with the police and gotten into fewer fights as adults (not true for females).

5. Participants have closer social contact with whites as adults, are more likely to live in desegregated housing, and had more friends in college (nearly all attended predominately white schools).

6. Female participants were less likely to have a child before age 18.

We think these six conclusions fit together, and that the last four conclusions serve to some degree to explain the positive effects of desegregation on educational attainment. If desegregated male students are less likely to see themselves as being victimized by white-run institutions and less likely to have trouble with the police, they should be less likely to drop out of high school. Desegregated female students, by postponing childbirth, are also more likely to finish high school. The fact that desegregated students are more comfortable around whites should decrease their chances of dropping out of college.

The students attended all white suburban schools, often with only a token number of desegregated black students present and often with a teaching staff which was entirely white. The drop-out rate for the program was quite high, probably reflecting a combination of black discomfort in a racially threatening situation plus the inability of white school staff to deal adequately with the prejudice of their white students and with black students who were emotionally and academically unprepared for desegregation. More women than men remained in the program through graduation; approximately half of all the students participating in the program dropped out and returned to segregated schools in Hartford. Those who did remain

gave very positive evaluations of their school experiences. In the view of the alumni of the desegregated program, the most important benefit of desegregation was the opportunity to learn to relate to white students.

We interviewed 69 black students who were presently enrolled in five suburban high schools. It was clear from these interviews that racial issues remain important to this day, even though most of the students give very positive evaluations of their schools in many respects. Male students seem to have a more comfortable situation in desegregated suburban schools than do female students.

The fact that black females who attended suburban schools do not complete more years of college suggests that there may be problems with the social structure and the counseling that surrounds black females in suburban high schools. We think that this is a serious problem which merits the attention of policy-makers in Hartford (and perhaps other cities as well).

ACKNOWLEDGMENTS

We are grateful to the Hartford Public Schools, Herman LaFontaine, superintendent, Robert J. Nearine, special assistant to the superintendent for evaluation, for all the assistance they provided to us. The office of Pupil Records was extremely helpful to our efforts to locate respondents. The Project Concern program staff, headed first by William Paradis and later by Mary Carroll, took time from their heavy schedule to help us greatly. We are especially thankful to Marjorie Little.

Many private and public schools warmly welcomed us and provided us with assistance in locating students. We wish to thank Paul Copes, William Thompson, and Ralph Conlon for helping us use their high school records in Hartford; we also want to thank Gladys Hyatt, Susan Hinton, Harold Barrow, and Fred Morris for helping us with their elementary school files. In the suburbs, we appreciate the help of Avon High School (John Shine, principal; Herbert Pandiscio, superintendent); Canton High School (Nicholas R. Salvatore, principal; C. Frederick Kelley, superintendent); East Hartford High School (Douglas Willett, principal) and Penny High School (Donald A. Cramer, principal) in East Hartford (Sam Leone, superintendent); Glastonbury High School (Theodore Bartolatta, principal; Henry Schoebel, superintendent); Granby High School (Richard Kisiel, principal; Pasquale E. Starble, superintendent); Manchester High School (Jacob Ludes III, principal; James P. Kennedy, superintendent); Newington High School (Ernest Perlini, principal; William P. Ward, superintendent); Plainville High School (Sandra Ginnis, principal; Ralph Sloan, superintendent); South Windsor High School (Gregory Plunkett, principal; Robert W.

Goldman, superintendent); Suffield High School (David Johnson, principal; Sidney I Dupont, superintendent); Conard High School (Michael Stephanian, principal) and Hall High School (Robert E. Dunn, principal) in West Hartford (Peter Relic, superintendent; Edward Reidy, director of research); and Wethersfield High School (Gary Burgard, principal; William J. Moriarty, superintendent).

A number of our respondents attended Bloomfield High School, and we wish to thank Herbert Chester and Esther Shafer for their help. We also were given access to records at A. I. Prince Technical School, and wish to thank Kenneth Gray, Angelo Tedesco, and E. R. Myer. We want to thank John Valk of Goodwin Technical High School. We also wish to thank John Allison and Karen Stein of the Capitol Region Education Council.

A number of private schools helped us greatly. We want to think Sister Doris Regan, O.P., principal of Northwest Catholic High School, Rev. William F. O'Keefe, principal of South Catholic High School, and Rev. William Charbonneau of East Catholic High School, and Father James G. Fanelli, superintendent of schools for the Hartford Archdiocese. We also want to thank the following independent schools and their headmasters, headmistresses or principals: Kingswood-Oxford (R.A. Lazear); The Renbrook School (Richard W. Davis); Ethel Walker School (Diana Deacon); Miss Porter's School; Watkinson (Charles E. Todd); and Loomis-Chaffee (John Rowe); Cromwell (Alexander Paddyfote); East Gransby (Alfred Lederman); Enfield (Louis Mager); Middletown; New Britain (Marie Gustin); Vernon (Bernard Sidman); and Windsor Locks (Peter D'Arrigo).

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At the Center for Social Organization of Schools, Johns Hopkins University, we are grateful to Gail Bellamy, who did much of the computer programming and data management, and to Clarice Jones, Hazel Kennedy, Carol Weinreich, Tom Webb, and James M. McPartland, director of the Center, who were all very helpful.

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The survey was conducted by Westat, and we are thankful for the hard work of Jane Simon, project director, and telephone supervisor Desiree Morgan.

Section III was written by Randi Miller as part of her doctoral dissertation at the University of Connecticut, Department of Sociology, and we are grateful to her faculty and the University for the resources it provided.

We would like to thank Shirley Lithgow, Barbara Eubank, and Leslie Harrington of Rand for typing this Report.

Our greatest debt is to the young men and women respondents in our survey and to their parents, who generously took time to answer our questions.

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I. INTRODUCTION AND RESEARCH METHODOLOGY

Any study of the impact of school desegregation must go well beyond the simple notion that the difference between segregated and desegregated schools is merely a matter of school quality. Most of the effects that we have located in this study seem to have nothing to do with the actual quality of school as conventionally defined. The important thing about the segregated school is that it has students of only one race; any change in textbooks, the training of teachers, the facilities provided, the cleanliness of the buildings is essentially beside the point. Any theory which is to be useful must focus on the social psychological and social structural differences between segregation and desegregation. The allocation of physical space on the basis of ethnicity leads to four types of consequences:

1. By limiting intergroup contact, segregation encourages stereotyping and prejudice.
2. Segregation, by separating two groups, discourages inter-ethnic friendship and encourages ethnic conflict.
3. Segregation carries symbolic meanings which affect minority attitudes about their position vis-a-vis the majority.
4. Segregation permits resources to be distributed inequitably.

Only the fourth of these mechanisms touches on school quality differences between segregated and desegregated schools, and even here the most important educational resource in any classroom is the ability, attitudes, and behavior of the other students in the room, a resource strongly affected by segregation but not usually thought of as part of school quality.

To the extent that research focuses on structural and psychological factors which differ between men and women--and there are many factors that do differ between the sexes--then the research must be sensitive to the psychology of sex differences. In the study we report here most of the effects of desegregation seems to be different for minority men and for minority women.

LITERATURE REVIEW

In the last 20 years, our understanding of what evaluation research should be like has grown and research approaches which seemed self-evidently correct 20 years ago now seem obsolete. Initially, research focused almost exclusively on short-term outcomes of desegregation and used mostly non-experimental designs. Today, evaluation researchers would argue for studies which considered all the direct and indirect effects of a program--in this case meaning research on all student outcomes and on the effects of desegregation on the school as an institution and the school district as a community.[1] They would also argue that non-experimental designs are biased, and that randomized experiments are usable in more situations than was previously believed.

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[1]The search for the societal impact of desegregation has been limited, with the exception of research on withdrawal of white students from the public schools after desegregation (Rossell and Hawley, 1982), which is of course only one aspect. There has been limited research on the impact of school desegregation on local political outcomes (Rossell, 1975) and more recently research on the impact of school desegregation on desegregation of residential areas (Pearce, 1980; Pearce, Crain, Farley, and Taeuber, 1984), but this research barely scratches the surface of an important topic. There is almost no research on the impact of school desegregation on the black community and its politics, despite the fact that so much of the civil rights movement seems to have been inspired by the Brown decision.

Most research on desegregation has focused on short-term outcomes, especially achievement test score changes. There seems to be an emerging consensus that black test scores rise after desegregation (Crain and Mahard, 1978, 1983)[2], but we do not know what value to put on this. Performance on standardized tests should be viewed only as an indicator of quality of education; high scores should be valued only if they genuinely reflect a superior education and can be shown to lead to a happier or more successful adult life. Research focused on student attitudes measured by psychological scales is also limited by our lack of knowledge about the relationship between scores on measures of concepts such as self-esteem or control of environment and the actual behavior of students, and the inability to relate those measures to behavioral outcomes, especially in adult life. Much of the psychological research has concluded that school desegregation has had very little positive effect on blacks because positive effects do not show with any consistency on measures of psychological variables administered to children (see Gerard, 1983). Recent reviews of the research on the effects of desegregation on racial attitudes (McConahay, 1978) and on self-concept (Epps, 1978; St. John, 1975) are inconclusive.

There is, however, an encouraging new development: there have been a series of research studies which focus on the impact of school desegregation on the adult behavior of graduates of desegregated schools, and which show considerable agreement (Braddock, Crain, and McPartland, 1984). The most important of these are studies of the perpetuation of segregation--the way in which segregated schooling leads to segregated behavior in adulthood.

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[2]Test scores of blacks in the U.S. rose markedly during the 1968-1978 decade, erasing about one-third of the gap between whites and blacks (Burton and Jones, 1982). Presumably, this reflects the benefits of both compensatory education and desegregation.

For example, graduates of segregate elementary and secondary schools tend to attend segregated colleges (Braddock, 1980; Braddock and McPartland, 1982); when they attend desegregated colleges, they get lower grades (Braddock and Dawkins, 1981) and are less likely to graduate (Crain and Weisman, 1972; Crain, 1970; Crain and Mahard, 1978).

Research has also shown that black graduates of segregated schools tend to have segregated associations in later life (Braddock and McPartland, 1983; Crain and Weisman, 1972). Segregation in adulthood prevents blacks from using social networks to obtain better employment (Crain, 1970; Dawkins and Braddock, 1985; McPartland and Braddock, 1981). Some research on desegregated black students indicates that they set their aspirations higher (Dawkins, 1983) but this does not appear consistently in all studies. There is more consistency in the finding that their aspirations are more coherently related to their skills and educational background (Hoelter, 1982; Wilson, 1979; Falk, 1978; Gable, Thompson, and Iwanicki, 1982). Research has also shown that black graduates of segregated schools are more likely to find themselves in segregated employment--working with black co-workers and uncomfortable when they are placed under a white supervisor (Braddock, 1983; Braddock and McPartland, 1983). Taken together, these findings suggest that desegregation in public schools should lead to a payoff in better occupations and higher incomes for blacks, but there is too little research in this area (Crain, 1970; Crain, Bellamy, and Strauss, 1985).

Many of the studies cited here show sex interactions. Dawkins found the male mobility aspirations affected more strongly by desegregation. Crain (1971) found a stronger effect of desegregation on male educational attainment. Black males in desegregated colleges are less likely to obtain their degree on time than males in segregated schools; the effect of

college segregation is much weaker for females (Braddock and McPartland, 1984). Braddock (1983) and Braddock and McPartland (1983) both find that desegregation has a stronger effect on male income.

The methodology of evaluation has also changed radically in the past two decades. Researchers have become more aware of biases in analyses and have developed more sophisticated methods of dealing with bias. Two decades ago, simple longitudinal pre-test/post-test designs were state of the art; today there are many references pointing out potential biases (an often cited one is Cook and Campbell, 1979) and frequent calls for randomized experiments.

The research reported here is part of this new wave of studies on long-terms effects. It looks not at test scores, but at years of schooling completed, difficulties with police, teen pregnancy, and attitudes and relations with whites.

THE RESEARCH METHOD: OVERVIEW

Our research is designed to take advantage of an early experimental evaluation of desegregation. Eighteen years ago in 1966, a group of students were desegregated in early elementary school using a randomized experimental design--two groups were selected randomly, one to attend desegregated schools, the other to remain in segregated schools. (The students were nearly all American Blacks; a few were of Puerto Rican or West Indian ancestry. A small number of whites were dropped from our research. Because nearly all the subjects were black, we will usually refer to the subjects as blacks rather than minority.) A

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randomized experiment provides for the near-perfect comparison of a treatment group of students to a control group. The main goal of this research is to simply follow up on that original 1966 study, locating the students after they had time to graduate from high school to see what differences in their lives as young adults can be attributed to desegregation.

The desegregation plan--Project Concern in Hartford, Connecticut--began on a two-year experimental basis in 1966 by selecting a random sample of students from four inner city elementary schools and permitted them to transfer to suburban schools while a second random sample was preserved as a control group. We have done a follow up survey of those students and also all students who were desegregated in the next five years of the program, 1968 through 1971. Most of the 1968-69 participants were also randomly sampled, but no control group was drawn. We attempted to construct a control group based on the same random sampling scheme as was used to select Project Concern participants in 1968 and 1969. The 1970-71 participants and a few of the 1968-69 participants entered the program as volunteers; we located a group of students who attempted to volunteer for the program in 1968 and used them as a control group for comparison to the volunteers. Thus, we have three substudies; a 1966 experimental design, supplemented by a second 1968-69 experimental design, supplemented by a third study of voluntary desegregation with a comparison control group. We searched school records and undertook a very large tracing effort to locate these various groups of students in 1983. There are some problems: the 1966 experiment's records are partly missing, the control group we randomly selected for comparison to the students randomly sampled in 1968 has lower family income than it should, considerable attrition occurred and some students could not be located. Despite these problems, we are convinced

that this is the strongest research design available in the United States today for a study of the long-term effects of desegregation.

The 1966 Experimental Substudy

Project Concern began in 1966, when, at the request of the State Department of Education, five suburban school districts agreed to accept 266 minority students from low income schools in Hartford. The students were selected from the four elementary schools which had the largest number of Title I eligible students. The sending area superficially resembles other big city low income areas; it is segregated with much rental housing and subsidized housing.

The project was viewed as a demonstration, with the decision to continue based on an evaluation done at the end of 2 years. Two random samples of students were selected, one to attend suburban schools and a second as a control group. The Hartford public schools chose to select entire classrooms to be sent to the suburbs because this would have the least impact on the sending school. In addition, it wanted to make use of the teachers who would otherwise be displaced by the removal of these students, and therefore decided that the 12 teachers who would be displaced by the program would be loaned to the suburban schools to provide additional support for the transferring students. A meeting of community leaders was held and a lottery was used to select 12 "treatment" and 12 "control" classrooms from the four minority schools. The classrooms ranged from entering kindergarten students through students beginning the 5th grade in the Fall of 1966.

In an experiment, it was very important that as many of the students as possible who are selected for a particular treatment receive that treatment so as to minimize bias in the study results. In order to encourage as many students as possible to agree to attend suburban schools, a group of teachers' aides visited homes to persuade parents to enroll their children. This effort apparently was successful, since only 12 students were not signed up for the program. (This process is described in Mahan, 1968).

Students were tested with both intelligence and achievement tests each Spring and Fall of both years of the program. Mahan found no important differences in the Spring 1967 testing of the two groups of students and found the Project Concern students to be noticeably ahead of the control group by Spring 1968. The difference was limited to those students who began desegregation in the lower grades. Students who entered the suburban schools in kindergarten or first grade showed considerably high test score gains than their control group. In contrast, the students who began desegregation in the fourth and fifth grades showed relatively little gain and in some cases losses in achievement.

The 1968-69 Experimental Substudy

In addition to the 266 students in the Project Concern 1966-68 experiment, we added every student who entered Project Concern in 1968, every student who entered in first grade or higher in 1969, and every student who entered in second grade or higher in 1970 or third grade or higher in 1971. (We also dropped everyone born after 1963, to eliminate students who would be too young for a reasonable evaluation of post-high school outcomes in 1982.)

Although the evaluation was finished by 1968, the policy of random sampling students from the low income schools to attend Project Concern was continued. In 1968 and 1969, Project Concern staff visited the sending schools and randomly selected students entering kindergarten, first, second, and third grades. Letters were mailed to the parents of selected students and an effort was made to visit the parents in their home, but in many cases families were not home, would not answer the door or school district addresses were out of date.[3] Fortunately, Project Concern preserved all the records of the recruitment effort in 1968-69, including the names of all the students who could not be contacted or whose parents refused to enter them into the program after being asked. We used all students who had been selected, whether they agreed to go into the program or not, in order to preserve the randomness of the original selection.

We then constructed a control group, going to the files of the sending schools and drawing random samples of the students present in 1968 and 1969 who were not selected for Project Concern. However, we were unable to duplicate the sampling method used in 1968-69 for Project Concern. Compared to the students selected for Project Concern, the random sample we selected contained more students of lower socioeconomic status.

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[3]The acceptance rate in 1968-69 was 50 percent, much lower than in 1966 (and lower still in 1970, when only 25 percent of selected students volunteered). We do not know, but it seems likely that this was because the time and money invested in contacting parents was reduced in the later years.

The Volunteer Substudy

In 1970 and 1971, the district sent letters to parents telling them that their child had been selected and encouraging them to participate, but did not send staff to visit homes. About a quarter of the parents agreed to participate. Preserving the randomness of the original sample would have required adding three students who had never participated in Project Concern to each student who did, obviously making an effect of Project Concern difficult to detect. We decided not to do this, but to instead treat the randomly sampled 1970-71 students who entered the programs as volunteers.

We also found a number of other students for whom there was no record that they had been randomly sampled. In some cases, they may have been randomly sampled, but in other cases we are fairly sure that the student volunteered to enter the program. While there was no systematic effort to allow families to volunteer for the program, there were times when some Hartford public schools had severe overcrowding problems and encouraged students to participate in Project Concern. We combined these volunteer students with those students who were selected in 1970 and 1971; they are similar from the viewpoint of the research method in that neither could be considered randomly sampled. We had a ready-made control group, since the Project Concern office had preserved a folder of telephone messages from parents who had called the program in 1969 in unsuccessful attempts to enroll their children in the project. We did drop those attempted volunteers whose families were able to put them into desegregated schools by enrolling them in Catholic schools or by moving to the suburbs.

The Survey

In all, we located the names of 1260 students who were eligible for Project Concern and selected 1353 other students to serve as the control group, for a total of 2613. We then searched the files of 30 different public and private school systems and found 95 percent of the records of these students. We then selected a sample of 1261 students, and attempted to locate them. We eventually located telephone numbers for 70 percent of the parents and interviewed 59 percent of the parents and 52 percent of the students. At the time of the interviews, the students ranged in age from 19 to 30, but the mean age was only 21.

Appendix A is a complete description of the fieldwork.

II. RESULTS

The main finding of our study is that participation in Project Concern increases the chance of graduating from high schools, and, for males, increases the number of years of college they complete.

DESEGREGATION AND YEARS OF SCHOOL COMPLETED

The most direct test of the desegregation-educational attainment relationship is to simply compare students who received all their education in Project Concern suburban schools with those whose education was entirely in the city. Table 1 makes this comparison for the best of the three substudies--the original 1966 randomized experiment.[1] A clear pattern emerges. Students who entered Project concern and remained in Project Concern schools until they finished their education all graduated from high school and one-half the males attended college. Nearly a quarter of the males had three or more years of college when they were interviewed, and it is likely that most of these students will eventually get diplomas. In comparison, over a third of the males and one-sixth of the females who were in the control group and who attended only inner city schools did not graduate. However, desegregation does not seem to be related to female college attendance rates; members of the

[1]The sample is stratified to select more suburban students and high school graduates than would appear in a simple random sample. All tables in this chapter are weighted to reflect true proportions. In the tables, N's are actual (unweighted n's) and statistical significance computed using formulas for weighted samples from Kish (1965).

control group are as likely to have three years of college as are those who attended Project Concern schools. Despite the small sample sizes, the major differences in Table 1 are statistically significant.

Table 1

EDUCATIONAL ATTAINMENT OF 1966 PROJECT CONCERN PARTICIPANTS AND THEIR CONTROL GROUP

Years of School Completed	Project Concern Participants (percent)	Control Group in Central City Schools (percent)
Males		
3 or more years college	24*	14
2 years college	18*	5
1 year college	12*	0
High school graduate	47	45
High school drop-out	0*	36
Total	100	100
(n)	(17)	(19)
Females		
3 or more years college	14	14
2 years college	9	0
1 year college	9	28
High school graduate	68	42
High school drop-out	0	16
Total	100	100
(n)	(19)	(15)

*Male Project Concern participants significantly more likely to have one or more years of college and less likely to drop out of high school (p less than .05, one-tailed test).

Table 2

EDUCATIONAL ATTAINMENT OF ALL PROJECT CONCERN PARTICIPANTS AND THEIR CONTROL GROUP

Years of School Completed	Project Concern Participants (percent)	Control Group in Central City Schools (percent)
Males		
3 or more years college	17[a]	8
2 years college	13[a]	6
1 year college	18[a]	12
High school graduate	46	38
High school drop-out	7[a]	36
Total	100	100
(n)	(72)	(137)
Females		
3 or more years college	12[b]	10
2 years college	10[b]	5
1 year college	19[b]	15
High school graduate	54[b]	42
High school drop-out	5[b]	28
Total	100	100
(n)	(111)	(117)

[a]Male Project Concern participants significantly more likely to have completed one or more years of college and less likely to drop out of high school (p less than .01, one-tailed test).

[b]Female Project Concern participants significantly more likely to have completed one or more years of college, significantly less likely to have dropped out of high school, and significantly more likely to have graduated from high school and not attended college (all p values less than .05, one-tailed test).

Table 2 shows the same relationship using the entire study, including the 1968 randomly sampled Project Concern and their control group and the volunteers in Project Concern and their control group. Again, the table compares only those students whose entire education was in Project Concern schools to students who were in the control groups and whose entire education was in Hartford City public schools. Only two-thirds of the males who attended central city schools graduated from high school. Only one-quarter attended college and of these nearly half that number received only one year of college education. In contrast, over 90 percent of the males who stayed in Project Concern schools graduated, nearly half attended college and most of those who did attend college received two or more years of schooling. For females, Project Concern students are considerably less likely to drop out of high school and are somewhat more likely to attend college, although the differences are not as great as they are for males.

The considerable advantage in educational attainment held by Project Concern alumni will become even larger in the future, because many of the Project Concern participants are still in college. Table 3 shows this: 24 percent of men who attended Project Concern schools in 1966 were in post-secondary school full-time when our survey was done while none of the 1966 control group were. The data for all three substudies and for women show the same pattern.

The results shown in these three tables overstate the effects of Project Concern, since the Project Concern participants and the control group are probably not comparable. The comparison is biased by selection effects among Project Concern participants; those less likely to graduate from high school and less likely to attend college are probably more likely to

Table 3

PRESENT FULL-TIME POSTSECONDARY SCHOOL ATTENDANCE OF PROJECT CONCERN PARTICIPANTS AND THEIR CONTROL GROUP

	(Percent in school full-time)			
	1966 Substudy		All Substudies	
Present School Enrollment	Project Concern Participant (percent)	Control Group (percent)	Project Concern Participant (percent)	Control Group (percent)
Males				
In school full-time	24[a]	0	33[a]	13
(n)	(17)	(20)	(73)	(141)
Females				
In school full-time	14	3	24	17
(n)	(19)	(17)	(111)	(130)

[a]Male Project Concern participants significantly more likely to be in school full-time (p less than .05, one-tailed test).

transfer out of Project Concern and return to Hartford City schools, thus disappearing from the participant group as we have defined it. At the same time, the students who are most likely to finish high school and attend college in the control group are likely to have transferred out of the Hartford City schools either to attend private schools or because their parents have moved to the suburbs. In anticipation of this problem, the study gathered data on all students who ever entered Project Concern schools, no matter how short a period of time they stayed, and all students who were ever members of the control group. Of course, students who participated in Project Concern for only a few years should not show a strong effect of desegregation, especially when compared to students whose families

moved to the suburbs. Thus, comparing everyone who ever participated in Project Concern with everyone who was ever in the control group will almost certainly understate the effects of desegregation. This comparison is nevertheless extremely useful. For if desegregation has no effect at all, then we should find that the high educational attainment of Project Concern participants in Tables 1, 2, and 3 are offset by the very low level of educational attainment of students who transferred out of the Program, so that the net effect is that all students who were entered in the Program should show no higher attainment than all students who were ever in the control group. If desegregation has a beneficial effect, this comparison should show a modest difference favoring Project Concern; if there is no difference, this suggests that all of the effects shown in Tables 1, 2, and 3 are spurious.

By choosing to follow up all program transfers in an "experiment entrant's analysis", we have created a research situation which Cook and Campbell (1979) refer to as "Attrition from treatment but not from measurement." They describe the advantage of this method:

> Attrition from treatment but not from measurement: Some experiments are conducted to take advantage of established record-keeping or measurement framework which has been developed and is maintained independently of the experiment per se. For some investigators, court records provided a frame, while for others records about withholding tax provide the frame. The advantage of such archives is that, while a respondent may drop out of the experiment or even refuse to participate from the very beginning, he or she is still included in the measurement system, and so post-test data can be collected from him or her.
>
> The growing emphasis upon volunteerism and informed consent in social experimentation will lead to an ever-increased number of experiments that use randomized invitations to treatments rather than randomized assignment to treatments. This means that an experiment which is planned to have two groups will have at least three: those who are invited and accept the treatment; those who are invited but refuse the treatment and are hence uninvited; and those who are the intended controls. A widespread error in analysis is to compare the treated either with the controls, or with the invited-untreated, or with a pool of invited-untreated and controls. Each of these strategies can obviously capitalize upon selection and result in pseudo-effects.
>
> When a measurement frame work exists, the selection problem can be dealt with in a conservative fashion by preserving the original assignment to treatments and including the units who were randomly invited but refused as though they had in fact been treated. This will inevitably lower the chances of inferring a treatment effect because

> some units are considered to have received the treatment but did not. However, when effects can be inferred from the analysis despite the conservative bias, conclusions about treatment effects are relatively easy to make.
>
> The utility of the conservative analysis becomes apparent when comparing its consequences to those which result from the most frequent alternative quasi-experimental analysis. In this, all the units that receive treatment are compared to all those that do not. This usually leads to "creaming" whereby the most able persons, who are more likely to take up invitations to novel experiences, receive treatment. Since they are the ones who will look best after the treatment (even without treatment), such "creaming" will result in pseudo-effects in nearly all quasi-experimental analyses. (p. 363)

Table 4 presents evidence that there are real effects of desegregation over and above self-selection bias. The first two columns show that the high school drop-out rates of males and females who entered Project Concern in 1966 were both considerably lower than the rates for students who were selected for the control group. The male students who entered Project Concern, whether they remained in the Program or dropped out, are considerably more likely to have attended college. The female 1966 Project Concern entrants are not more likely to have attended college than are the students selected for the control group, however. The two right hand columns of Table 4 show the data when all three substudies are combined and the pattern is the same. Project Concern entrants are less likely to drop out of high school and if they are male, more likely to attend college. For females, there is again little evidence that being selected for Project Concern increases the number of years in college they complete. We conclude that desegregation benefited females by increasing high school graduation rates, but there is no evidence that it increased female college attendance as it did for the males.

Table 4

EDUCATIONAL ATTAINMENT OF ALL PROJECT CONCERN ENTRANTS (INCLUDING PROJECT TRANSFERS) AND THEIR CONTROL GROUP, WITH 1966 ENTRANTS AND THEIR CONTROL GROUP ALSO PRESENTED SEPARATELY

Years of School Completed	1966 Project Concern Entrants (percent)	1966 Control Group Entrants (percent)[a]	All Project Concern Entrants (percent)[b]	All Control Group Entrants (percent)[a]
Males				
3 or more years college	13	14	11	10
2 years college	20	3	12	6
1 year college	10	7	12	12
High school graduate	43	38	43	41
High school drop-out	15	38	23	33
Total	100	100	100	100
(n)	(23)	(38)	(135)	(171)
Females				
3 or more years college	14	17	11	11
2 years college	12	0	9	5
1 year college	9	26	14	16
High school graduate	55	38	54	43
High school drop-out	12	19	19	25
Total	100	100	100	100
(n)	(19)	(34)	(69)	(145)

[a]Includes students who transferred to suburban and private, and regional vocational schools.
[b]Includes 1966, 1968-69, and volunteer entrants.

Table 5

PRESENT FULL-TIME POST-SECONDARY SCHOOL ATTENDANCE OF ALL PROJECT CONCERN ENTRANTS (INCLUDING PROJECT TRANSFERS) AND THEIR CONTROL GROUP, WITH 1966 ENTRANTS AND THEIR CONTROL GROUP ALSO PRESENTED SEPARATELY

Years of School Completed	1966 Project Concern Entrants (percent)	1966 Control Group Entrants (percent)[a]	All Project Concern Entrants (percent)[b]	All Control Group Entrants (percent)[a]
Males	14	0	22[c]	12
(n)	(39)	(25)	(137)	(175)
Females	16	9	18	20
(n)	(36)	(21)	(175)	(158)

[a]Includes students who transferred to suburban and private, and regional vocational schools.
[b]Includes 1966, 1968-69, and volunteer entrants
[c]Male Project Concern entrants (all substudies) significantly more likely to be in school full-time (p less than 0.1, one-tailed).

In Table 5, we apply the same test to the data on present full-time college attendance. Men and women who entered Project Concern schools in the 1966 experiment, whether they remained in the program or transferred out, are more likely to be full-time college students today, but when data from all three substudies are pooled, we see a relationship between entering Project Concern and present college attendance only for males.

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There is also the possibility that the Project Concern students and the control groups are mismatched in other ways. To pursue this issue, we interviewed the students' parents and measured their socioeconomic status, and searched school files to find early test scores.

Table 6 shows the difference in social status between Project Concern and control group students. The students who remain in Project Concern schools do come from families with more educational resources. The students who entered Project Concern schools in the 1966 experiment come from the same family backgrounds as the control group, thanks to the random selection; however, those who remained as participants in the program came from more affluent families than those who remained in the control group. There are similar biases in the other two substudies.

Fortunately, the differences are not consistently large. In several instances, the 1966 substudy control group students have more resources (e.g., female family home ownership), and other differences are often less than 10 percent. One large difference, typewriter ownership, probably does not imply greater family resources, but only that suburban schools encourage students to purchase typewriters. The same inconsistent pattern appears in the volunteer substudy: two differences are in the wrong direction, and four others are 10 percent or less.

The 1968 substudy shows strong family background differences, despite our efforts to randomly draw a control group matching those selected for Project Concern. Apparently, we did not use the same sampling criterion (we may have selected students assigned to bilingual classrooms, for example). This means that controlling on family background should have some impact on students from this substudy.

Table 7 summarizes regression equations in which years of school completed are predicted from participation in Project Concern, the family background variables shown in Table 6, the

individuals' age, and vocabulary test scores taken in second grade.[2] Rather than presenting the complete equations, the table shows only the predicted dependent variable scores from the regression, assuming Project Concern and control group students have identical scores on all control variables. Thus, Table 7 shows the mean years of school completed for students who are at the sample mean in their age, test scores, and family background factors and whose schooling was either totally desegregated or totally in segregated Hartford public schools. These predicted years of school completed are compared to the actual years of schooling (i.e., when no controls are used). By comparing uncontrolled and controlled differences, we can estimate how much of the apparent effect of desegregation is spurious. Using regression to "control" on family background, age, and early achievement is inadequate, if Project Concern participants had higher attainment in part because their age and family background was highly favorable for educational attainment, a regression approach would understate the importance of family background and prior achievement, leaving too much of the higher attainment of the Project Concern participants to be attributed to desegregation. However, Table 7 is reassuring on this point, for it shows that for males, only 0.1 of the 1.4 year advantage held by 1966 Project Concern participants (and only 0.1 year of the 1.0 year advantage held by the male participants from all three substudies) is attributable to prior test scores, family background, and age. Even if this were a gross underestimate, and the effect of the control variables much larger, it would still explain only a small fraction of the apparent effect of desegregation. (For example, an effect twice as large would only explain 0.2 years of attainment.)

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[2]Second grade vocabulary test scores were only available for about one-half of the sample.

Table 6
FAMILY BACKGROUND OF PROJECT CONCERN AND CONTROL GROUP STUDENTS IN EACH SUBSTUDY

	Family Background of Project Concern Participants and Control Group Members								
	1966 Experiment			1968 Substudy			Volunteer		
	Project Concern Participants (%)	Control Group (%)	Difference (%)	Project Concern Participants (%)	Control Group (%)	Difference (%)	Project Concern Participants (%)	Control Group (%)	Difference (%)
Males									
Mothers have HS diploma	57	53	(+4)	68	39	(+29)	62	26	(+36)
Own home	57	24	(+35)	52	26	(+26)	32	42	(-10)
Own encyclopedia	85	89	(-4)	86	70	(+16)	85	74	(+11)
Newspaper	70	86	(-16)	95	83	(+12)	93	67	(+26)
Typewriter	77	19	(+58)	77	40	(+37)	68	17	(+51)
2 or fewer siblings	24	26	(-2)	40	17	(+23)	26	19	(+7)
Lived with both parents	50	40	(+10)	48	32	(+16)	40	31	(+11)
(n)	(17)	(20)		(25)	(106)		(31)	(19)	
Females									
Mothers have HS diploma	47	37	(+10)	76	34	(+42)	65	62	(+3)
Own home	50	75	(-25)	43	24	(+19)	26	19	(+7)
Own encyclopedia	69	97	(-28)	90	58	(+32)	81	61	(+20)
Newspaper	94	94	(0)	93	70	(+23)	85	75	(+10)
Typewriter	58	41	(+17)	79	39	(+40)	66	57	(+9)
2 or fewer siblings	32	14	(+18)	31	15	(+16)	28	35	(-7)
Lived with both parents	65	34	(+31)	47	28	(+19)	44	7	(+37)
(n)	(19)	(16)		(34)	(93)		(57)	(21)	

Table 7

YEARS OF SCHOOL COMPLETED FOR PROJECT CONCERN PARTICIPANTS AND MEMBERS OF THE CONTROL GROUP, WITH AND WITHOUT CONTROLLING FAMILY BACKGROUND, AGE, AND SECOND GRADE TEST SCORES

	(Mean Years of School Completed)			
	1966 Substudy		All Substudies	
Sex	Project Concern Participant (percent)	Control Group (percent)	Project Concern Participant (percent)	Control Group (percent)
Males				
Uncontrolled	13.4	12.0	12.9[a]	11.9
Controlled	13.3	12.0	12.8[a]	12.0
Females				
Uncontrolled	12.7	12.6	12.7	12.1
Controlled	13.0	12.3	12.5	12.2

[a]Male Project Concern participants (all substudies) have significantly more years of school completed (p less than 0.05, one-tailed test), whether or not family background and second grade test scores are controlled.

The results for women are more complex, but less important. Desegregation has less effect on educational attainment for women than for men, which is consistent with previous tables. The addition of controls cause the differences to change in inconsistent ways, but these apparent effects are all not significant and should be ignored.[3] The important point concerning women is that the

[3]When controls are introduced, a large, but not statistically significant, positive effect of desegregation on women's attainment appears in the 1966 experiment. This is mainly because the 1966 participants in Project Concern are young (younger entrants into Project

introduction of controls does not greatly reduce the apparent effects of desegregation (the reduction is only 0.3 years in the data for all three substudies, and there is no reduction at all in the 1966 experiment). This means the control variables are too weak to raise doubts about our earlier conclusion that desegregation lowered the high school drop-out rate for women.

The presence of the experimental design, coupled with our ability to follow up all the subjects in the experiment (including those who refused to participate) gives us an opportunity to subject our finding that desegregation increases years of schooling to very rigorous test.[4]

At this point, we have three pieces of evidence suggesting that desegregation increases years of schooling for blacks:

1. Project Concern participants have higher educational attainment than segregated students.
2. These differences persist even when the attainment of program drop-outs is included with those who participated in Project Concern, and students who "dropped out" of the control group by transferring to desegregated schools are included in the control group.
3. The difference in educational attainment of desegregated and segregated students seems large when compared to differences in the family background of desegregated and segregated students. When regression is used, family background effects appear to be too small to explain the effects of desegregation.

Concern, especially those who began desegregation in 1966 in kindergarten, were more likely to remain in the program). Since younger women have typically completed fewer years of college, this means that the effects of desegregation are underestimated in the uncontrolled data.

[4]Appendix B extends this analysis in two ways. It presents more analyses comparing all project control entrants (including drop-outs) to all control group entrants (including those who transferred to Catholic schools or whose families moved to the suburbs); this is called the "experiment entrants" method of analysis. In a second, more rigorous analysis, we compare everyone who was ever assigned to Project Concern (including those whose parents refused to enroll them) to the control group entrants; this is called the "experimental assignment" method of analysis.

In Appendix B, we extend this analysis and draw two further conclusions:

4. The positive effect of desegregation persists when we simultaneously include program drop-outs and use regression to "control" on family background, age, and second grade test scores.

5. The educational advantage of Project Concern students remains if we include in the experimental "treatment" group every student who was initially selected for Project Concern, including students who refused initially (and indeed may not even know they were ever offered the opportunity to participate!). This is the most conservative way to deal with the possibility of self-selection bias.

Taken together, the evidence that desegregation in the Hartford suburbs increased black educational attainment seems quite convincing. The major question for policy-makers is, how large is this impact? This answer is difficult, since our various analyses give a range of answers. It seems likely that the estimates provided by Tables 1, 2, and 3, that high school drop-out rates are reduced to one-fifth what they would otherwise be, and male college attendance rates doubled, are too optimistic. On the other hand, the estimates taken from Table 4 and 5 and from Appendix B, which show high school drop-out rates cut to two-thirds or one-half what they might have been, and male college attendance rates becoming one and one-half times greater than they would be if the students had remained segregated, probably understate the effect. If indeed the truth lies somewhere between these two estimates, the policy significance of the finding is considerable.

OTHER EFFECTS OF DESEGREGATION

Table 8 shows some other effects of participating in Project Concern: measures of perception of racism, difficulties with police, early childbearing, and contact with whites. The results are again derived from regression equations controlling on family background, age, and second grade achievement scores, in an analysis which parallels that presented in Table 7 above.

Attitudes about Racism in College and Elsewhere

College is a time of considerable pressure, both academic and psychological, on many students. Obviously, the pressure is greater if one adds to the normal tensions the experience of being a minority on campus. (In Connecticut, all the colleges and universities are predominately white.) It may be that one reason why the college drop-out rate is lower among Project Concern graduates is that they place a different affective interpretation upon their college experiences. They are, for instance, considerably less likely to feel their college is racist. These results for males are given in the first line of Table 8. None of the graduates of a Project Concern high school says that he experienced discrimination in college, while 22 percent of control group members who attended college say they did. When family background, age, and second grade test scores are used as control variables in a regression analysis, these figures remain the same. The controlled results in Table 8 are the expected values taken from a regression equation holding constant family background, age, and second grade test scores. Whether this finding is a result of desegregated blacks underestimating the amount of discrimination about them or segregated blacks overestimating the amount of discrimination is unanswerable with our data.

Perception of discrimination in college is correlated with perception of discrimination in other areas, and male Project Concern alumni score lower on a scale based on perceptions of discrimination by employers, downtown store clerks and white citizens generally in Hartford. The data in the second line of Table 8 have been transformed to a scale with a mean of 52, since an average 52 percent of all respondents perceived discrimination on any one question in this scale. (The scale has a standard deviation of 50, which makes the differences interpretable as if they were the results from a single yes-no question rather than from a scale.)

For women, there is no evidence that attending a segregated school increases one's perception of discrimination either in college or in Hartford generally.

Table 8

PERCEIVED DISCRIMINATION, DIFFICULTIES WITH POLICE AND VIOLENCE, AND CONTACTS WITH WHITES, FOR PROJECT CONCERN PARTICIPANTS AND THEIR CONTROL GROUPS, WITH AND WITHOUT BACKGROUND CONTROLS

Attitudes	No Controls		Controls[a]	
	Project Concern Participant	Control Group	Project Concern Participant	Control Group
Males				
Perceived college discrimination (%)	0	22	0[b]	22
Perceived discrimination generally (scale)	.43	.51	.42	.53
Police/violence (scale)	.14	.33	.17[b]	.32
Contact with whites (scale)	.60	.45	.62	.45
Moved into white residential area (scale)	.46	.39	.49	.36
Had few friends in college (%)	19	31	24	34
Females				
Perceived college discrimination (%)	12	14	18	15
Perceived discrimination generally (scale)	.50	.52	.50	.49
Police/violence (scale)	.06	.14	.11	.12
Contact with whites (scale)	.47	.41	.48	.40
Moved into white residential area (scale)	.56	.41	.61[b]	.38
Had few friends in college (%)	18	37	20	36
Bore child before age 18 (%)	8	29	12	26

[a]Controls on family background, age, second grade test scores.
[b]p less than 0.05, one-tailed test.

Project Concern alumni and the control group alumni are in similar environments; we think it is the perception which differs, not the reality. But it is also true that Project Concern alumni, accustomed to being with whites, may evoke different responses from the whites they interact with.

Trouble with Police and with Violence

We asked respondents three questions designed to crudely measure their difficulties with police and their involvement in unacceptable kinds of aggression. Our three measures are "have you ever been picked up by the police?", "have you ever spent the night in jail?", and "since you are an adult, have you ever been in a fight?" The third line of the top panel of Table 8 show scores on a scale which goes from 0 to 100 and approximates the mean percentage of male students answering "yes" to each of these questions. Male graduates of Project Concern schools are significantly less likely to report difficulties with police or aggression. Project Concern females score lower on this scale than do those in the control group, but this seems entirely due to social class and academic test score effects; when these are controlled, the effect of desegregation disappears.

Relations with Whites

Table 8 also shows various measures of interracial relations. A "contact with whites" scale is built on the percentage of black respondents saying that some of their present friends are white and that they visit whites in their homes. The rates are higher for males generally, probably reflecting a more generous definition of friendship than is use by women, and perhaps also reflecting the greater freedom of mobility that males have. Males from Project Concern high schools are significantly more likely to have contact with whites than are graduates of city schools. They are also more likely to have searched for or moved into an apartment in a predominantly white neighborhood (the two measures are combined in the second scale), and are less likely to have complained about not having

friends when they were in college (since all the colleges in the Hartford area are overwhelming white, a lack of friends presumably reflects a difficulty in establishing friendships with whites). The difference for females are also quite clear and in fact are stronger on two of the three measures.

Teenage Childbirth

There is a lower rate of teenage childbirth experienced by women who were enrolled in Project Concern, as shown in the bottom panel of Table 8. Only 8 percent of alumni of Project Concern gave birth before they are 18, compared to 29 percent of the control group. Only a part of this 21 percent difference can be considered an effect of desegregation. Some females in Project Concern become pregnant, but transferred to a special school for mothers in the Hartford city school system, so they are not counted as Project Concern participants (see Appendix B for an analysis which takes this into consideration).

Self-Selection Bias

The data in Table 8 are biased toward showing positive effects of desegregation. To some degree, Project Concern alumni have more years of schooling, less difficulties with police, etc., because they are a self-selected group of superior students; others who were not as motivated or able to attend college, or more prone to difficulties with police, etc., simply declined the opportunity to participate in Project Concern or else withdrew from the program before completing school. Controlling on family background, age, and early test scores does not completely remove this bias. In Appendix B we carry out a thorough (and very conservative) analysis of the effects of self-selection, and conclude that all the significant findings in Table 8 stand up under tests for self-selection bias (with the possible exception of the male police/violence scale results.)

INTERPRETATION

We found a series of positive effects of desegregation. On the whole, they are as expected. The most reasonable are the results showing that both males and females from desegregated schools have more positive social contact with whites; presumably, persons who had contact with members of the opposite race in childhood will relate to them more easily in adulthood. We are also not surprised at a decline in teenage pregnancy. We would expect desegregated black students to be in a situation where more of their friends would be planning on college; they also would be more isolated from the black community and therefore dating less during high school. The same result appears in Crain and Weisman (1972).

Desegregation may reduce perceptions of racism for black males simply because it reduces the sense of strangeness in dealing with whites and white institutions. Blacks from desegregated backgrounds may have learned to overlook instances of prejudiced behavior; or perhaps segregated blacks tend to misinterpret innocent white behavior. Either explanation seems quite reasonable.

There are two possible explanations why desegregation might reduce arrest rates and adult violence for black males. Desegregation may reduce difficulties with police because it reduces perception of racism and anger about racism. For decades social scientists and black intellectuals have claimed that black violent behavior, even that directed at other blacks, has its ultimate roots in anger at white racism (Kardiner and Ovissey, 1951; Crain and Weisman, 1972; Grier and Cobbs, 1969). One research study found that intraracial black violence declined in three black communities while they were mobilized for civil rights activity (Soloman, Walker, O'Conner, and Fishman, 1965). This imlies that agression toward other blacks can be replaced by non-violent conflict with white racist policy-makers. A second major theory in juvenile delinquency research, the differential association theory, also predicts that Project Concern students will have less difficulty, simply because they have less time and opportunity to interact with inner city violent young people.

Why doesn't desegregation reduce female scores on the police/violence scale? One reasonable explanation is that since the many female graduates of Project Concern are not in college, they may have been associating with young men from segregated schools and sometimes cooperated passively in antisocial behavior initiated them. Thus, at the time of the interview, a desegregated black woman's history of association with antisocial black males may not look very different from that of black women who attended inner city schools.

This is not a completely satisfactory explanation, since it does not explain why desegregation also does not affect female perceptions of discrimination in college or in society generally. Females from desegregated schools perceive more discrimination than do males from desegregated schools, and we have no good explanation for this.

Finally, why does desegregation increase educational attainment, but do so mainly in males? It seems to us that there are three factors which could increase educational attainment: These are (1) academic success; (2) motivation; and (3) a fondness for school. A student who does well in school will be motivated to continue in school simply in order to continue getting the rewards that school offers. A student who is motivated may not do well in school but may feel strongly that completion of schooling is necessary for his or her future. Many students remain in school not because they like schoolwork but because they like school itself--a chance to participate in social activities with friends and feel part of a school community.

Viewed from this perspective, it seems reasonable that desegregation should both lower the high school drop-out rate and increase the years of college completed. Desegregated students should be more motivated, since they are in schools where there is a strong norm favoring high school and college graduation. While desegregated students do not make very good grades in suburban schools, they also do not get into very much disciplinary difficulty compared to students at the inner city high schools, and that should make them like school more, or at least give them fewer reasons to dislike school. It seems reasonable that a student who perceived a good deal of discrimination in college will

be more likely to quit. And if segregated schooling encourages students to perceive a good deal of discrimination in Hartford generally, it will probably also cause them to have a more critical view of, and be more willing to drop out of, their own high school. Therefore, we think that we have two reasonable explanations for the lower high school drop-out rate of Project Concern students. On the one hand, they are less likely to get into trouble with the police and we suspect that means that they are less likely to get into trouble with their school administrator. Secondly, they see less discrimination, suggesting that they are less angry about this and hence less likely to get into difficulties with school officials and less likely to want to drop out of school.

If desegregation makes it easier for blacks to establish friendships with whites, this will also make them more likely to stay in college, since their larger circle of college friends will make them feel less alienated. Since both males and females from desegregated schools complain less of not having friends in college, we would expect desegregation to increase the college retention rates for students of both sexes. However, female college retention is not improved by desegregation.

Since women from segregated schools are not more prone to have difficulties with the police and are not more perceptive of discrimination in a predominantly white college, these are two reasons to argue that desegregation should not enhance their years of college completed.

In summary, we see some reasons why desegregation should increase black male college attendance and lower black male college drop-out rates; and we see some reasons why the effect should be weaker for women. However, we do not think the analysis completely explains the failure of desegregation to enhance women's college success; further research is needed.

III. STUDENT EXPERIENCES WITH PROJECT CONCERN

One half of the male students and two-fifths of the female students who entered Project Concern left the program to return to Hartford City Schools. The 187 respondents who transferred out of Project Concern gave reasons which fell under five general headings: (1) Most commonly they said they did not like the racial situation; 42 mentioned racial problems or discrimination, and 20 said they did not like their classmates or teachers. (Both classmates and teaching staff were virtually all-white in these schools.) (2) 26 said they wanted to go to school in the city with their friends and relatives (typically their siblings did not attend school with them.) (3) 20 complained about transportation or logistics--often families moved to a new residence and it was no longer possible for the child to be picked up by a school bus. (4) 17 said they were suspended, and 3 left because of a conflict over school policy, which we think referred to a disciplinary policy. (5) Only 14 said they did not like the school, and only 5 said they left in order to go to a better school.

The Project Concern desegregation plan makes things difficult for many students. The plan does not use any sort of geographic zoning, so that students who attend a particular suburban school come from all over the North Hartford residential area, rather than one particular neighborhood. Thus, students usually do not ride the bus with any of their neighborhood friends. In some cases siblings are separated, attending different suburban schools. Robert Gable and Edward Iwanicki (1982) analyzed drop-outs of Project Concern and pointed out that it is difficult to determine how many students were pushed out by disciplinary suspension and expulsion and how many students voluntarily left, since in many

cases a student who wished to leave the program but whose parents would not permit it simply acted up in school and was expelled.

HOW ALUMNI VIEW PROJECT CONCERN

Despite the high transfer rate from Project Concern, evaluations by participants are generally quite positive. We asked each student to describe the experiences they had in the high school they attended. Those Project Concern students who remained in the suburbs were quite favorable. Asked to give a letter grade to their school, graduates of suburban Project Concern schools graded their schools with an average B or better, while graduates of inner-city schools gave their schools a mixture of B's and C's. Suburban graduates complained less about school rules being unfair and were no more likely than central city graduates to say they "didn't belong" in their school. The only area where suburban students complained more about their school was in saying they experienced racial discrimination--hardly surprising since the central city schools were overwhelmingly black. It is also interesting that students who transferred out of Project Concern and returned to city schools were more negative in their evaluation of their high school in Hartford than were students who had never been in Project Concern. This suggests to us that students who had experienced Project Concern had higher standards for schooling than those who had never seen suburban schools.

We compared Project Concern alumni who remained in suburban schools until they finished their education, Project Concern drop-outs, control group students and students from the control group "drop-outs" who moved to the suburbs or transferred to desegregated

schools, in their attitudes toward school (Table 9) and their experiences in their last school (Table 10).

Project Concern graduates tend to come from somewhat more affluent families than do Project Concern drop-outs or central city students, so again we used multiple regression to control for seven background factors: parent's education, parental homeownership, number of siblings, presence of an encyclopedia, typewriter, or daily newspaper in the home, number of parents in the home while growing up, age, and the student's score on a second grade vocabulary test. Rather than reporting the full equation in standard form, Table 9 shows the results in the form of simple cross-tabulations and also simulated cross-tabulations--the predicted values of Project Concern participants and non-participants if each group were assigned average scores of the seven background variables.

In Table 9, the actual difference among the four classes of Project Concern participants are shown first; the results from the regression equation are immediately below it. For example, the first line of the Table shows that 83 percent of male students who never participated in Project Concern and who finished their education (either graduating or dropping out) in a central city school in Hartford said that they like the last school they attended. Seventy eight percent of those students who never participated in Project Concern and who finished their education in a non-city school (typically the metropolitan trade school, a Catholic school, or the high school in Bloomfield, a suburb where many blacks moved during the 1970's) said they liked their school; 71 percent of students who had been in Project Concern but had transferred out of it and finished their education in Hartford city schools said that they liked their school, and 89 percent of the Project Concern students who

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finished their education in a non-city school, (either a Project Concern school, the metropolitan vocational school, or occasionally a private school), said they liked their school.

Controlling on background factors changes the patterns of liking school only slightly. The Project Concern transfers who finished in a central city school tend to show somewhat more positive evaluations of their school when background factors are controlled.

The remainder of Table 9 shows Project Concern graduates giving their school a higher letter grade (the question was "we'd like your overall opinion about your school based on your own experiences at that school. Taking all things into consideration if you had to give your school a grade of A, B, C, D, what grade would you give?"). A sense of "not belonging" is least common for control group students who were in suburban or private schools and roughly the same for the other three groups. Perception of rules being unfair is much lower in suburban Project Concern schools than in the others. Sense of being discriminated against is higher in the two categories of non-city schools. For females the pattern is roughly similar except that there is more negative reaction to central city schools on the part of students who left Project Concern. Project Concern transfers in central city schools like school much less than others do, give them lower grades and more often feel they didn't belong. Project Concern graduates of suburban schools give their schools higher grades, do not particularly complain about belonging, do not see the rules as being unfair but do say they suffered discrimination.

Table 9
PERCEPTIONS OF HIGH SCHOOL BY PROJECT CONCERN PARTICIPANTS AND THEIR CONTROL GROUP STUDENTS

In Project Concern	Yes	Yes	No	No
Last School	City Public (%)	Project Concern (%)	City Public (%)	Private or Suburban (%)
Males				
Liked last high school (%)				
Uncontrolled	71	89	83	78
Controlled	76	86	82	76
Mean grade given to school (4=A, 0=F)				
Uncontrolled	2.3	3.2	2.6	2.8
Controlled	2.4	3.1*	2.6	2.8
Didn't "belong" (%)				
Uncontrolled	23	21	23	14
Controlled	19	21	23	15
Thought school rules unfair (%)				
Uncontrolled	31	19	39	33
Controlled	29	19.*	41	34
Perceived discrimination (%)				
Uncontrolled	13	32	11	26
Controlled	9	33.*	11	27.*
Females				
Liked last high school (%)				
Uncontrolled	66	91	82	87
Controlled	66.*	90	82	87
Mean grade given to school (4=A, 0=F)				
Uncontrolled	2.2	3.0	2.6	2.8
Controlled	2.3*	3.0*	2.6	2.7
Didn't "belong" (%)				
Uncontrolled	38.*	18	23	15
Controlled	38	22	21	18
Thought school rules unfair (%)				
Uncontrolled	41	23	40	27
Controlled	42	21.*	40	27
Perceived discrimination (%)				
Uncontrolled	21	22	13	25
Controlled	20	28.*	10	26.*

NOTE: Controlling on family background, age, and test scores.
*p less than 0.05, two-tailed test.

Table 10

EXPERIENCE IN HIGH SCHOOL OF PARTICIPANTS, TRANSFERS AND CONTROL GROUP STUDENTS

In Project Concern	Yes	Yes	No	No
Last School	City Public (%)	Project Concern (%)	City Public (%)	Private or Suburban (%)
Males				
Received honors (%)				
Uncontrolled	41	67	42	54
Controlled	43	62.[a]	44	49
Had lots of friends (%)				
Uncontrolled	89	90	87	92
Controlled	80	88	90	93
Mean number of white friends				
Uncontrolled	.52	1.47	.51	.82
Controlled	.57	1.52[a]	.48	.81
Was ever suspended (%)				
Uncontrolled	53	38	47	53
Controlled	52	41	46	55
Participated in extracurricular activities (%)				
Uncontrolled	30	42	33	40
Controlled	28	41	34	38
Females				
Received honors (%)				
Uncontrolled	42	58	39	58
Controlled	44	49	44	46
Had lots of friends (%)				
Uncontrolled	77	92	83	90
Controlled	77	91	84	89
Mean number of white friends				
Uncontrolled	.54	1.40	.42	.98
Controlled	.54	1.41[a]	.39	.99[a]
Was ever suspended (%)				
Uncontrolled	38	24	35	15
Controlled	36	27	35	12.[a]
Participated in extracurricular activities (%)				
Uncontrolled	24	37	32	42
Controlled	23	34	34	37

NOTE: Controlling on family background, age, and test scores.
[a]p less than 0.05, two-tailed test.4

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Table 10 looks at some of the experiences students report having in school. Males in Project Concern suburban schools surprisingly report receiving honors most often--this despite the fact that they are not academically as good students as their classmates. They also report having many friends--the percentages there are not lower than they are for central city--and, not surprising, report having more white friends. The control group students who transferred to non-city schools do not report having as many white friends; this may be because some are in a vocational school which is heavily minority, or it may reflect the fact that one needs early childhood experiences to relate well to whites, and most of the students who are in Catholic schools or in the high school in Bloomfield (the suburb with a large black population) had attended segregated elementary schools.

Given the transportation problems, it is particularly surprising the Project Concern students who finished their education in suburban schools had a higher level of participation in extracurricular activities than did non-Project Concern students in central city schools. (The number reported in Table 10 is the mean number of activities participated in from a maximum of 5 choices--journalism, drama, music, sports, and student council or clubs.)

For females there is no tendency for suburban Project Concern students to have received more honors as was the case with male students. We also see that although females report as much extracurricular participation in suburban Project Concern schools as they do in central city schools, there is not a difference favoring suburban schools as there was for men. Project Concern women students do report having had many friends, had a large number of white friends, and had relatively little disciplinary difficulty in the suburban schools.

One difference of interest to our analysis is the very low level of suspensions for female students in the fourth column--those who were not in Project Concern but who moved to suburban schools or the Catholic or vocational schools. This is in contrast to males with the same educational experience who have a very high suspension rate in high school. This is despite the fact that these should be abler and better motivated students. Crain and Weisman (1972) and Crain, Mahard, and Narot (1982) both argue that black males more than females are poorly prepared for interracial experiences in high school if they attended segregated elementary schools. The higher level of suspension for males but not females who come from non-Project Concern elementary schools into non-city high schools is consistent with this pattern.

The students in suburban Project Concern schools in our survey seem to be saying that the schools they went to are objectively good schools, with high academic standards, good teachers, and with well-organized school discipline policies, as reflected in the low percentage of students calling the school rules unfair. For males extracurricular activities provide ample opportunities and there are honors to be gained. The students who finished in the suburban schools say that they liked school. At the same time, however, the high transfer rate reflects a series of problems with the program, some of which are potentially solvable. In many of the schools the students are spread too thinly--with only a handful of black students in an entire elementary or high school. Minority students do not have the "critical mass" needed for emotional support. The almost total absence of black teachers in many of the schools and what appears to be a relatively weak human relations program has resulted in a situation where a large number of students complained about racism as a factor in their leaving the

suburban schools. Finally, because students are so thinly spread transportation problems are serious, and have become more serious due to recent budget cuts.

WHAT TODAY'S STUDENTS SAY

In order to get a clearer sense of student attitudes toward their school experience, 69 face-to-face, very informal interviews were held with a random sample of present-day Project Concern students in five suburban high schools. The interviews focused on the student's social lives: friends, integration into school environment, extracurricular activities, dating, feelings about school life and Project Concern, and future plans. Field observations were also conducted at each school--in classrooms, cafeterias, gymnasiums, bus stops, and after school. Teachers, principals, and guidance counselors were also interviewed.

Five schools with different numbers of Project Concern students were chosen. An attempt was also made to choose districts representing a variety of per capita income brackets.

What do the Project Concern students perceive as the "good" thing about Project Concern? There were three points that were stressed by many students: that they were (1) getting a better education (2) in a better environment which was (3) socially heterogeneous. Over half (55 percent) felt they were getting a better education in the suburbs.[1] The following two comments are fairly typical in this regard:

First,

---

[1]Many of the suburban high school principals and staff members refute this claim, saying that the education in Hartford is just as good, if not better. They sometimes acknowledge, however, that the distractions are perhaps greater in Hartford.

> Project Concern has helped me a lot because if I didn't come out here and went to school in Hartford, I won't say I'd be stupid, but if I was to come out here and then transfer to a Hartford school, I'd automatically graduate because their education out here is higher than it is in Hartford.

Second,

> I'm getting a better education than I would going to a Hartford school, and I really like that because if I was to go to a Hartford school let's say like in my junior year they would skip me to my senior year because of what I know. I get a much better education here.

Further, a third of the Project Concern students believe that the program was good because they were in a better environment than they would be in if they went to school in Hartford. In addition, a third of the Project Concern students felt they gained from participating in Project Concern because they met different types of people than they would if they remained in Hartford. When asked how things would be different if she went to school in Hartford, on student remarked.

> It would have been different, like I would grow up being prejudiced toward white people. 'Cause where I live, its black people ... and I would grow up to be prejudiced. By going to this school, I'm glad that I did because I've grown up not to be prejudiced. And it's really good. This program has really did that. You know, white people and black people get together, see what each other is like, and be friends and stuff. This program has really helped that.

Another student commented:

> I think Project Concern is good because it gives us an opportunity to get into a different environment. I think that by going out here it better prepares us for the outside world. In our house my mother taught me that white people, they will always be out there so you have to get along with them to really live in the outside world. I think that going out here better prepares me. A lot of my friends go to Hartford schools, and they don't like white people. But I think this really helped me, now that I look over it, even though I don't like coming out here sometimes, and it gets on my nerves. I think it really helps in the long run.

The major criticisms of Project Concern given by the students revolve around transportation difficulties. As shown in Table 11 transportation problems were more prevalent at schools that rely on public transportation to get their Project Concern students to school. At these schools, the Project Concern students have a journey which involves at least two legs: one to downtown Hartford, another to the school. The lack of school bus transportation emerges as a crucial negative component of their desegregation experience. The situation is exacerbated because at one time school buses were available, but due to budget cuts Project Concern students at certain schools (those in areas with already existing public transportation routes from Hartford) are now forced to use public transportation.

Table 11

PRESENT PROJECT CONCERN STUDENTS' PERCEPTIONS OF TRAVEL TIME TO SCHOOL AND TRANSPORTATION DIFFICULTIES, BY SCHOOL

	Carlton[a]	Herald	Irving	Mooney	Tarrytown
No. of respondents	13	8	14	18	16
Average no. of minutes spent getting to school[b]	51	39	25	53	34
Average no. of miles to school	9	4	13	10	18
Percentage reporting transportation difficulties[c]	38	62	7	67	12

[a]The names of the five Connecticut schools have been changed. Irving and Mooney contain grades 9 to 12; Carlton and Herald, grades 10 to 12; and Tarrytown, grades 7 to 12.

[b]The question was asked, "How long does it usually take you to get to school in the morning?" Project Concern participants at Carlton, Herald and Mooney traveled to and from school by public transportation; Tarrytown and Irving participants traveled by school bus.

[c]The question was asked, "What would you say are the bad things about the Project Concern program?" Multiple responses were allowed.

One student explained what the transition from school bus to public transportation was like:

> It was really unfair to us...it's really hard to accept. We already wake up early. When we were taking the school bus we had to wake up a 6 o'clock, and we had to get out of the house by 20 of 7. When you have to wake up at 5 o'clock, it's dark outside and you have to walk, and you're sleepy. There used to be days, when I'd be up until 11:30, 12 o'clock, because I work, and I work from 2:30 until quarter of 6. But the time I catch a bus to get downtown it would be 20 of 7 and by the time I get home it would be 7:30. And then you would have to do things at home. By the time you sit down and do your homework, and you do your hair, and you get your things up for the morning, because in the morning time you have no time to iron clothes and get your things up for school, it be 12:30, 1 o'clock. And you have to wake up at 5 o'clock. It's a rough schedule.

Another student commenting on the busing situation said:

> They cut our busing...that's the thing I hate the most. I think that they should put back in the busing cause it causes a lot of problems. If you miss the bus in the morning, you have to take another one and be late to school.

Project Concern students at both schools using school buses (Irving and Tarrytown) report relatively short travel times (less than two minutes/mile). Therefore it is not surprising that Project Concern students at those two schools are less likely to perceive of transportation as a negative component of the Project Concern program. Aside from transportation, no other negative issues were mentioned by very many Project Concern students. Thirty-two percent of the students interviewed could think of no problems associated with Project Concern.

Most Project Concern students like school either very much (41 percent), or fairly well (49 percent). Only a few (16 percent) report that they feel as if they don't belong in school, and most (81 percent) report liking their principal. Few (7 percent) believe that there are serious problems at their school between blacks and whites, but a substantial amount (64 percent) acknowledge minor problems between the races.

Table 12

DIMENSIONS OF SCHOOL EXPERIENCE FOR PRESENT PROJECT CONCERN STUDENTS

Factor Items	Percent "Yes"	Factor Loadings
Factor 1. The "model student"		
Good student activity		.86
Parents very satisfied with grades	29	
Bought school yearbook	48	
Received honor or award	55	
Not at all uncomfortable with other race	87	
Academic performance		.83
Received grades of B or better	20	
Parents very satisfied with grades	29	
Self-rating of ability: B or better	41	
Plan to go to college	55	
School involvement		.51
Participated in more than two activities other than sports, music, band, chorus	13	
Bought a school ring	42	
Has not been suspended	61	
Phone and personal contact with other race	83	
School belonging		.40
Has both black and white friends	23	
Was part of leading crowd	43	
At least one best friend at school was white	71	
Felt he or she belonged at school	84	
School extracurricular participation		.35
Attended school social event	29	
Attended one school activity	39	
Participated in band or in varsity or non-varsity sport	64	
Attended school game	74	
Friends supported respondent's interracial activities	90	-.50
Factor 2. Interracial school activity and dating		
Ever dated white person	19	.88
Interracial social activities		.80
Dated white person from school or went steady with white person	25	
Afterschool friends went to same school	38	
Attended pep rally or musical at school	90	
Ever went steady with white person from school	4	.58
School extracurricular participation (see Factor 1)		.40
School belonging (see Factor 1)		.34

Table 12 (continued)

Factor Items	Percent "Yes"	Factor Loadings
Factor 3. Integration into the school community		
Wore school button	35	.71
School identification		.64
Care if school wins in competition	39	
Had a school banner	57	
Had school clothing	47	
Had a lot of friends at school	86	
School extracurricular participation (see Factor 1)		.56
Friends supported respondent's interracial activities	10	.51
School belonging (see Factor 1)		.37
Perception of school race relations (see Factor 4)		.33
Considered school rules fair	72	-.52
Factor 4. Positive perception of race relations		
Liked school		.79
Almost no problems between blacks and whites at school	28	
Gave school a grade of A or B	58	
Liked principal	81	
Saw no problems with Project Concern		.69
Considered school rules fair	72	.52
Perceptions of school race relations		.49
Black students participate in everything	28	
Black and white students go steady	49	
Black and white sutdents date	58	
Would go steady with a white	67	
School involvement (see Factor 1)		-.37

Four Coping Strategies

In order to reduce the lengthy questionnaires to manageable size, a multi-stage scaling procedure was used. First, 33 questionnaire items were Guttman scaled into nine scales. Then these nine scales plus six other individual questionnaire items were combined and factor analyzed, yielding four factors. In interpreting these four factors one can look at them as defining four alternative ways

to cope with a white suburban school. The four factors are shown in Table 12. For each Guttman scale or individual item, the factor loading is given; and for every item, the percentage "yes" on that item is shown. Students who score high on any of the first three factors are all involved in extracurricular activities of the school, have white as well as black friends and attend school social events and sports affairs. However, there seem to be three different strategies which enable them to be so highly involved in school.

Factor 1: Being a "model" student. One route is shown in factor one and is simply to be a good student. The students who are high scorers in this particular factor have good grades, plan to go to college, have not been suspended and are active in more school extracurricular activities. On the positive side, these categories represent the epitome of assimilation. On the negative side we find only one category, which at first glance appears inexplicable. Project Concern students who are best assimilated into the school environment have positive experiences at school, but they report negative reactions from their Hartford and fellow Project Concern friends, who resent the fact that model students go places after school with white students. As we shall see, students who adopt other strategies which integrate them into the school do not feel this same pressure to avoid whites. We suspect that for this group, associating with whites is perceived by other blacks as part of academic "rate-busting"; that what these students are doing wrong to earn the hostility of their black friends is being too good--cooperating too well with white students, embarrassing their brothers and sisters with their good grades.

To highlight this orientation, let us quote in part from a model student named Albert.[2]

> I don't consider myself to be a minority because my (white) friends, they don't consider or even look at it as me being a different color--just being regular, being just like them. They (Project Concern students) prefer to be black, they want to just hang

[2]All names of the respondents have been changed to maintain anonymity.

> around with the blacks, they don't want nothing to do with the whites...I'm not like that...I was called awhile ago an oreo kid, that's a black person hanging around with whites and trying to act white...I attended the ski club and I asked if anyone else wanted to get into it, and you should have seen their faces, it was hysterical. What is this kid talking about, the ski club? It's a bunch of honkies gonna be there.

In contrast to this approach, we find that the student who is totally alienated from school receives a low factor score on this dimension. One such student told me of the things he did not like about school.

> We be watched all the time. They trying to bust us for some kind of thing. Like one time somebody stole $100 and I was called down and my friend was called down. And when I asked the assistant principal why he do that he said cause you're suspicious.

Factor 2: Interracial Sociability. The second factor identifies a group of students whose path to involvement in school is interracial socializing. A large part of high school student's activities are geared toward heterosexual socializing; these activities include dating, going steady, attending parties, and dances. Undoubtedly, the degree to which one is considered "popular" is both a reflection of and reflects the amount and type of heterosexual opportunities these young people experience. Thus, the second factor is a composite of types of social activities that all bear on the degree to which the respondents are appealing to, and have opportunities to interact with, the opposite sex. The Project Concern student receiving the highest factor score on this dimension was a black male who was, at the time of the study, dating a white girl from school. In addition, he reported that he was part of the leading crowd at school, participated in both varsity and non-varsity sports, and had attended numerous school events, including social events. Clearly, this type of individual typifies the Project Concern student most well-integrated into the social life of the high school culture.

When Walter, the student with the highest factor score on Factor 2, was asked whether or not the social life of Project Concern students differed from students living in the community he replied,

> No, not really. Well, some of the time you wouldn't really see the girl you're dating as often as you would like, not unless you came out here every day...But you can do the same things that any other students do that live out here if you want to. You can do anything you want to do if you put your mind to it. So I would say there's no difference.

Only a small number of students, mostly male, are involved in interracial dating; only 4 percent of Project Concern high school students had ever gone steady with someone from their school. A more typical student is one with a low factor score on this dimension, as characterized by Vanessa, a black female who has never dated or gone steady with a white person. She typically spends her Saturday nights with friends from her neighborhood, rather than with schoolmates. She attends few school events, and does not go to school social gatherings. She participates in only one activity, the multi-cultural club. By her own account Vanessa does not have a group of friends with whom she "hangs out" after school, and reports that she is not part of the leading crowd in school. When asked whether white and black students did similar things on dates she replied, "I don't know--maybe." Clearly her knowledge and experiences with respect to interracial sociability are limited.

Factor 3: School Involvement. This scale measures what is often called "school spirit". Without dating, students high on this scale nevertheless participate in a wide range of school activities, wear school sweaters and buttons and care about the fate of the school's teams. But interestingly, this group of students who are so highly involved in the school are the ones who are most likely to complain that school rules are unfair. Perhaps this is simply because they are so highly involved in the school that they are constantly brought into contact with the school rules--they are the ones who know from personal experience about all the regulations governing social activities, for example. It may also be that these students, because they are so well integrated into the school, are not threatened by expressing negative opinions about school rules. Since they are integrated into school, they can complain without raising the cognitively dissonant feelings they might feel if they complained without

being integrated into the school and pleased with much of their social experiences there. (If this school is so bad what am I doing here?)

Students with high scores on this factor say that problems with school rules exist due to a lack of uniformity of school rules; the reason Project Concern students experience difficulty as school is not because they are marginal students (after all, they do everything that white students do), but because the school (including administrators, teachers, and white students) is prejudiced. Blacks are picked on, the rules were made for and apply only to the white students, and black students often have difficulty conforming to those rules. The following quote from Ella, a student with a high score on this factor, is enlightening.

> Some of them's prejudiced--some students and some teachers...Like I had this teacher last year, she was prejudiced. If I talked I'd get in trouble, if a white student talked she'd just tell them to lower their voice.

Of course some of this perception of the unfairness of school rules comes from the problems experienced by Project Concern students due to their busing situation. For instance, many Project Concern students complain about the lack of flexibility shown by the administration to the problems associated with busing. Of particular concern to many Project Concern students was the fact that they were usually penalized for coming to school late, which was easy to do particularly in cases where public transportation was used. Also in many cases, after-school detentions were difficult to attend. I spoke with one guidance counselor who expressed his concern over his school's use of "Saturday School" (a half a day of detention on Saturday morning for students with major discipline problems) as a punishment mechanism, and the particular problems Project Concern students had with such a policy. The counselor recognized the possibility of interpreting this type of punishment as a "covert effort" on the part of the school administration to place undue obstacles in the path of these students, since it was extremely difficult for most of them to get to school on the weekend.

Students with low factor scores on the dimension can be described as apathetic; they don't wear school buttons, nor do they have school banners or clothing with the school name on it. Michael was such a student. He reports that he doesn't care at all if the school wins in any type of competition, has few friends at school, doesn't go to school social events. He does not consider himself part of the leading crowd, nor does he want to be. None of his best friends at school are white. As can be expected, Michael does not feel as if he belongs at school. The group of people he spends most of his time with are all blacks from Hartford, and he simply doesn't know whether black and white students at school date or go steady with each other. In response to a question asking what the good things were about Project Concern, Michael replied, "There ain't none." When asked why he comes to school in the suburbs he told me, "My mother, she thinks I can get a better education here."

Yet Michael thinks the rules at school are fair. It appears as if students like Michael, those who do not become involved, do not blame the alienation they experience on something as trivial as unfair school rules.

Factor 4: Ideological Commitment to Integration. Finally, the fourth scale shows that it is possible for students to hold positive feelings about the school without being involved directly in its social life. These are students that we think of as having an ideological and impersonal commitment to desegregation. Rather than speaking of personally benefitting from the school, they talk in terms of minorities generally benefitting. The same pattern appears in many of the responses from the larger survey: when asked what the good things about Project Concern were, ex-students often talked about the program as being good for "minorities" rather than good for themselves.

This factor indicates that those with a positive attitude toward school view blacks as an integral part of the school environment, but are less likely themselves to participate in many school activities. They are less apt to have a school ring, are more likely to have been suspended, and less likely to have contact with other schoolmates in person and on the phone. Perhaps because these

students are in actuality less involved, they can afford to be more positive in their attitudes toward school and race relations. In other words, this attitude may very well be based on an ideological rather than a de facto commitment to desegregation.

Janice is a student with a high score on Factor 4. Her response to a question concerning the good things about Project Concern reflects this discontinuity between attitude and behavior. She told us the following:

> (It's good) that we get to come to school here. That we get bused out to different schools other than inner Hartford. Any school is good if you're going to learn, but they have more opportunities out here than they do in Hartford. I know I won't get along if I went to school with my own color...I think when I'm around my own color it's more problems. Because there's a lot of fighting. We don't have that here. *When I'm by myself I can do my work, but not when I'm with my friends. And out here you don't get to see your friends.*

Clearly Janice sees busing as offering her the opportunity to get a better education in an environment that is conducive to learning and where there is an absence of hostility.

The remarks made by Mae typifies students with high negative factor scores on this dimension.

> I think the school is prejudiced. I didn't want to come out here...it seems that some things are unfair. Like for example, two girls were being late for class. They're black, and it was a hallway full of other kids, and the principal didn't say anything to anyone else. He singled them out, which I don't think is fair. So a lot of rules which we have here aren't fair. It's like him... and this school does not do things that black people can get into. Like at our prom, we wanted to have a D.J. that could play white music and black music. But no, they (white students) didn't want this. They wanted a band, which we can't comprehend.

Yet Mae also identified several positive aspects of Project Concern. As she told me,

> I think it's good because it gives us an opportunity to get into a different environment. I think that by going out here it better prepares us for the outside world.

She also participates in several school activities, has a school ring, has not been suspended, and has both in-school and telephone contact with white students.

SUMMARY

The data identify one major area of discord associated with Project Concern, transportation arrangements, but indicate some degree of general satisfaction on the part of many of the high school students in the study. This is not to suggest that Project Concern has been, in the opinion of the students interviewed, a resounding success. The clinical observations based on the scaling of dependent variables and subsequent factor analysis clearly demonstrate both positive and negative components of the desegregation experience. This should not surprise anyone; the suburban schools seem to have done very little to deal with the problems of desegregation. Given this, we should not be surprised that, for example over half the black students say they don't care if their school teams win, and only a quarter say that blacks participate in all school activities.

IV. CONCLUSIONS AND DISCUSSION

Project Concern provided several important benefits to black students. The first classes have finished school and we can conclude that compared to similar minority students who attended segregated Hartford city schools,

1. Male participants were more likely to graduate from high school. This is probably true for females as well, but the effect on females is weaker.
2. Male participants complete more years of college. (This is not true for females).
3. Male participants perceive less discrimination in college and in other areas of adult life in Hartford (not true for females).
4. Male participants have experienced less difficulty with the police and gotten into fewer fights as adults (not true for females).
5. Participants have closer social contact with whites as adults, are more likely to live in desegregated housing, and had more friends in college (nearly all attended predominately white schools).
6. Female participants were less likely to have a child before age 18.

However, participants in the program suffered more discomfort in exchange for these benefits. Half the males and nearly as many females left the program, often because of their social isolation. Most participants were in schools with only very few other black students, and the most commonly given reason for dropping out of the program was racial problems.

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Transportation problems have always been serious, and recent cuts in service have aggravated this problem. Some of the black students in the program had problems with school discipline and were suspended or expelled. Those students who remain in the program speak highly of this suburban schools they attended.

We have established some links in the chain of reasoning which connects school desegregation to increased educational attainment for men. The desegregated men are more likely to finish high school and college in part because they perceive less discrimination in their environment, have less trouble with the police, and relate better to whites. Similarly, women from segregated schools are more likely to bear a child before age 18, which may encourage dropping out of high school. Segregated women are less comfortable around whites, and have fewer friends in college, but this does not seem to lead to a higher college drop-out rate.

We do not know why desegregation does not lead to higher college attendance or graduation rates for women, but we think one problem may be a sex-bias in the suburban high school. Recall (in Section III) that black male Project Concern students participate more in extracurricular activities and receive more honors in suburban schools than do similar students in central city schools; for women there is no difference between the two groups. After our interviews with students presently in suburban high schools, we were convinced that black males do have a better situation, mostly because the athletic teams black males play on are more prestigious than women's teams. It may also be that suburban counselors may be helping more black males than females to attend college, but we have no data on this. We

believe that suburban high schools should be concerned with providing all that is needed to help black females succeed in college.

There is an important irony in this analysis: black males, who benefit most from the Project Concern desegregation program, are more likely to drop out of Project Concern. We are not sure there is an easy answer here. Males (black or white) cause more trouble in school, are more likely to get suspended and black males are more likely to quit the program voluntarily, so it may be difficult to decrease their drop-out rate. Nevertheless, it would serve the best interest of black students and the society if the black male drop-out rate from Project Concern were reduced. Over half of the male students entering the program in 1966-71 finished their schooling outside of Project Concern. The drop-out rate has not probably changed greatly; only 24 out of the 69 present Project Concern high school students whom we interviewed were males.

Although we have no direct evidence on this point, it seems likely that modifications to the program could be made to encourage both male and female students to stay in Project Concern (through a better transportation policy, a better school discipline policy, or an increase in the number of students in the program so as to attain a critical mass of minority students to provide social support for students.[1]

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[1]This is not a certainty. It may be that a program in which half the students drop out is in fact optimal; had policies been changed to encourage more of the drop-outs to remain in suburban schools, their own rate of antisocial behavior might have remained as high or become even higher as a result of the change in policy. This does seem unlikely, but is a possible interpretation of the data which we cannot disprove.

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V. APPENDIX A: DATA COLLECTION METHODOLOGY

The total sample--every student who was offered a place in Project Concern 1966-71 plus appropriate control groups--was 2613, divided amongst the seven categories of the sample as shown in Table A.1. We dropped the names of 139 students who were either nonexistent (duplicate names, for example) or ineligible for the study (white students, control groups students who would have been ineligible for Project Concern because they qualified for special education classes, some Hispanics dropped because the 1968-69 control group did not match its Project Concern comparison group ethnicly, and students who were too young to reach adulthood by the time our survey was to be done. Table A.1 shows 562 students (263 + 299) in the 1966 experiment, 1456 (329 + 331 + 796) in the 1968-69 randomly sampled group and the control group we drew to match it and 595 (337 + 258) students in the volunteers-control group comparison.

Our first task was to locate the academic records for these students. Students who began their schooling in the North side neighborhoods of Hartford may have finished their education in the metropolitan area in any of thirty school systems--either because they were in Project Concern, because they attended Parochial or non-sectarian schools, or because their family moved to any of a number of suburbs. This meant that many student records would be divided, part in Hartford city schools and part in suburb schools. Although the Hartford public schools and the suburban schools invest a great deal of resources in an effort to preserve the transcripts and other academic records of their students, any school system with extremely high pupil mobility is plagued with serious record management problems. Despite

this, (and with considerable help from the Hartford Public School administration) after approximately two-persons years of effort we found the transcripts and at least partial academic records of approximately 95 percent of the students. Table A.1 shows that we deleted from the study 401 students who moved out of the metropolitan area before they had time to complete school; 63 students who had not yet completed school; 6 students who had died and 49 who had been institutionalized in a custodial institution before reaching school leaving age. We also deleted 52 students who had been selected for the control group to match voluntarily desegregated Project Concern students but who had themselves been able to move out of Hartford or transfer to private schools. Together these losses constitute 22 percent of the sample, which when added to the 5 percent of the records which we were unable to locate means that our final sample of located academic records was 1910, 73 percent of the original sample.

The next step in the process was to reduce the sample for the telephone survey from 1910 to 1261 to reduce survey costs. We did this by under-sampling respondents who were graduates of central city schools and under-sampling high school drop-outs. Sampling probabilities ranged from certainty (for suburban graduates and suburban drop-outs) down to 20 percent (for inner-city female high school drop-outs). All the tables in this report are weighted so that the bias introduced by sampling is corrected. In order to reduce costs, we sampled with certainty the families which had two or more children in the sample of 1910 (up to a maximum of four children per family). There were 357 "extra" siblings in the study, so that we only had to locate 904 families. Since tracing costs were the large portion of our survey costs, reducing the number of families lowered costs considerably.

Table A.1

DISPOSITION OF ORIGINAL PROJECT CONCERN SAMPLE

	1966 Experiment Substudy		1968-69 Experiment Substudy			Volunteer Substudy		Total
	PC	Control	PC	Refusal	Control	PC	Control	
Original listing	270	305	351	340	878	347	281	2752
Ineligible								
Extra Hispanics					35			35
Whites	3	5		6	6	3	2	25
Duplicate records	4	1		2	24	4	6	41
Special education			2	1	17	3	2	25
Too young							13	13
Total	7	6	2	9	82	10	23	139
Eligible sample	263	299	329	331	796	337	258	2613
Dropped from study								
Deceased	2			1	1	1	1	6
Institutionalized	12	7	5	3	17	3	2	49
Still in school		1	13	9	22	15	3	63
Moved from area	34	30	36	73	168	27	33	401
Moved to non-city schools							52	52
Total	48	38	54	86	208	46	91	571
Records never found	6	49	5	29	17	10	16	132
Sample used in study	209	212	270	216	571	281	151	1910

The survey began by tracing respondents, using the last address known to the school system and telephone directory assistance. After these approaches were exhausted, we searched school records, looking for families who had younger children who were still in school. We also used motor vehicle records and tax records, but these yielded addresses without telephone numbers. We verified

addresses with registered letters requesting respondents to call us collect, but only a few did so. When funds were finally exhausted, we had located addresses on a large portion of the sample--approximately 90 percent; however, we succeeded in obtaining telephone numbers of slightly less than 70 percent of the families, and completed interviews with only 59 percent of the parents and 52 percent of the students. We interviewed one parent (usually the mother) and then asked to speak to the students (or asked for his/her phone number if they lived away from home). Only 5 percent of the respondents were refusals once telephone contact was made. Response rates for each category of the design are shown in Table A.2.

Table A.2

INTERVIEW COMPLETION RATES

	1966 Experiment Substudy		1968-69 Experiment Substudy			Volunteer Substudy		Total
	PC	Control	PC	Refusal	Control	PC	Control	
Records located	209	212	270	216	571	281	151	1910
Samples	149	112	192	130	350	225	103	1261
Parent interview obtained	82	56	115	71	208	152	58	742
Percentage	55	50	60	55	59	68	56	59
Student interview obtained	75	46	104	68	184	139	45	661
Percentage	50	41	54	52	53	62	44	52

Table A.2 shows a slight tendency for response rates to be higher among Project Concern alumni and their parents than among the alumni of the Control group. This combined with our decision to over-sample students who completed their education in suburban schools means that the treatment group is larger than the control group for both the 1966 substudy and the substudy of voluntary students. However, since so many of the students assigned to Project Concern either never entered or withdrew from the program and transferred back to Hartford city schools, the study still contains many more students who graduated from Hartford city schools than graduated from suburban schools. Of the 1853 cases for whom we have significant data, 745 were initially assigned to Project Concern and slightly over half of these (385) finished their education in a Hartford city public school. Of the 1108 respondents who were never in a Project Concern school, 154 finished their education in non-city schools, mostly Parochial schools and public schools in those suburbs where black families moved in the 1970's. Survey response rates were higher for Project Concern participants than for members of the control group. We interviewed 60 percent of those students who finished their schooling in a Project Concern school, compared to only 52 percent of Project Concern drop-outs and 48 percent of the Control group students who were always in Hartford public schools.

Because of the higher sampling rates and higher response rates for students who stayed in Project Concern, of the 660[1] completed students surveys 48% of the respondents were initially assigned to Project Concern schools and over half of these finished their education in the suburbs, private schools or in the metropolitan area trade schools.

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[1]There are 661 completed student surveys; in one case we could not determine the last school the respondent attended.

VI. APPENDIX B: ANALYSIS OF SELF-SELECTION AND RESPONSE BIAS

The analysis in this report hinges upon the comparison of students who have experienced desegregation and those that have not. The comparison is valid only if one can assume that the students who are desegregated do not differ from the segregated students in any way except for their desegregation. In the typical research study, one has little in the way of a guarantee that this is the case. For example, in a typical voluntary desegregation study, there is the possibility that students who volunteer for desegregated schooling come from higher income families. They may also be more highly motivated, or come from families which have generally provided more help to their children in their schooling. They may be students who are more talented in school work; or they maybe the less talented students--those who have done badly in their segregated school, so that their parents search for desegregation as a device to rescue their child's education. Finally, the students who are voluntarily desegregated may be those for whom the logistics are more manageable--those from two-parent households, or those who live relatively close to the receiving schools.

Thus instead of the ideal situation where the desegregated students differ from the segregated students only in the fact of their desegregation, in the usual research design we knew that segregated and desegregated students differ on a variety of dimensions and that some of these differences are unknown to the researcher.

Typically the best technique available to deal with this problem is some sort of statistical matching method, using analysis of covariance or multiple regression to adjust the scores of each group up or down to compensate for differences in pre-test scores or

background variables. But the techniques for adjustment to compensate for pre-test differences are themselves biased, typically under-adjusting the data so that control variable differences persist in a concealed fashion in the final result (see Cook and Campbell, 1979, pp. 295-300). If students in desegregated schools are superior in family background than the control one would expect a regression or covariance analysis to still show desegregated students learning more in desegregated schools after adjustment for pre-test differences have been made, even if this were not really the case. Equally important, researchers are unable to control for any unknown or unmeasured differences between the two groups.

The Project Concern experimental design gives us an opportunity to use stronger analysis methods. We have removed the effects of self-selection bias with two different analysis techniques, which we have called the "experiment entrants method" and the "experimental assignment method."

THE 'EXPERIMENTAL ENTRANTS' METHOD

The "experimental entrants" approach was used in Tables 4 and 5 and is based on comparing all students who ever attended Project Concern schools (even if they later withdrew from the program), with students who never entered the program (even if they found some other route to a desegregated education). If the apparent high educational attainment of Project Concern alumni is entirely due to the self-selection of more able students remaining in the program while weaker students dropped out, then we should find that the high attainment of Project Concern alumni is entirely offset by the correspondingly low attainment of the Project Concern students who transferred back to city schools, so that

the educational attainment of the program "stayers" and "leavers" combined should be the same as the attainment of the control group. The "experiment entrants" analysis includes Project Concern entrants who entered the program but returned to the central city schools and also the control group entrants who started out in the control group but whose last school was desegregated (primarily these were Catholic schools and the high school in Bloomfield, a suburb where many black families moved in the 1970's).

The analysis in Tables 4 and 5 showed that the entrants were more likely to finish high school and male entrants completed more years of college.

In Table B.1, we press this type of analysis one step further, by using multiple regression to control on nine variables--the student's age, second grade test scores, presence of two parents in the home, mother's educational attainment, number of siblings, home ownership, and presence of a typewriter, encyclopedia and daily newspaper at home. The table is an amalgam of separate regression equations, one for each level of educational attainment. (A sample equation and the computations used to estimate one line of Table B.1 are shown in Table B.2 following).

Table B.1 supports our overall conclusion that desegregation increased high school graduation rates and increased male college attendance. For example, Table 4 showed that 23 percent of male entrants into Project Concern did not finish high school, but 32 percent of the entrants into the control group did not--a nine point difference.

In Table B.1, we use multiple regression to control on background, second grade test scores, and age, and find that these percentages change to 26 percent and 32 percent--a six point difference. For women, the drop-out rates in Table 4 were 19 percent for Project

Concern entrants and 25 percent for control group entrants, and adding the control variables changes these numbers by 1 percent each--to 20 percent and 24 percent, respectively. The differences, though smaller than those in Table 4 and not statistically significant, are all in the predicted direction.

The differences in Table B.1 are large enough to suggest that desegregation has important educational effects. This analysis underestimates the effects of Project Concern. About one-half of the male students who entered the program in 1966 returned to the Hartford public schools after as little as three weeks or as much as ten years of suburban education. A number of students in the control group were able to obtain desegregated schooling by enrolling in parochial schools, private nonsectarian schools, or through their family moving to Bloomfield. In using the "experimental entrants" approach, we thus are comparing a "treatment group" of students, many of whom did not receive a desegregated education to a "control" group many of who did not receive a segregated edcuation. Since there are more students in the treatment group who received a desegregated schooling than in the control group, there is a valid comparison here; but one would expect the overall treatment effect to look very weak because of the impurity of the design.

Table B.1

EXPERIMENTAL ENTRANTS ANALYSIS: EDUCATIONAL ATTAINMENT AND PRESENT COLLEGE ATTENDANCE OF PROJECT CONCERN ENTRANTS AND CONTROL GROUP BY SEX, WITH FAMILY BACKGROUD, AGE, TEST SCORES CONTROLLED

	Project Concern	Control Group
Males (in percentages)		
College graduate	5	4
2+ years of college	16	12
1 year of college	10	12
High school graduate	42	39
Drop-out	26	32
Total	99	99
Females (in percentages)		
College graduate	5	3
2+ years of college	12	14
1 year of college	12	17
High school graduate	51	42
Drop-out	20	24
Total	100	100

EXAMPLES OF REGRESSION TECHNIQUES USED TO PRODUCE TABLE B.1

Table B.2 shows the regression equation used to create the fifth row of Table B.1; it estimates the high school drop-out rate for male Project Concern entrants and control group entrants. Table B.1

Table B.2

MULTIPLE REGRESSION EQUATION, WITH SCHOOL DROP-OUT RATE AS THE DEPENDENT VARIABLE, FOR MALES

	Percent of Cases	b	β
Control variables			
Parent's education		-.003	-.02
Home ownership		.106a	.11[b]
Presence of typewriter, encyclopedia, newspaper		-.074a	-.15
Number of siblings		.008	.05
Two parents		-.189a	-.20
Age		-.011	-.05[b]
2nd grade vocabulary score		-.004	-.08
Independent Variable: Desegregation Experience			
Project Concern participant	20	-.201a	-.18
Project Concern withdrawal	22	.050	.05
Control: withdrawal	9	-.087	-.06
Control: city schools	49	(c)	(c)
Multiple r			.390

[a]Significant, p less than .05, one-tailed test.
[b]Sign of coefficient is in unexpected direction.
[c]This dummy variable was omitted; regression coefficient is automatically zero.

Table B.3

COMPUTATION OF TYPICAL VALUE IN TABLE B.1

The expected drop-out percentage, D, for entrants into either Project Concern or the control group is computed from the following equation:

$$D = \sum_{i=1}^{i=8} b_i X_i + \sum_{j=8}^{j=11} b_j X_j + C \qquad (1)$$

where b_i, b_j = unstandardized regression coefficients

x_i = mean of ith background control

x_j = mean of jth desegregation experience (where 1 = in the category and 0 = not in the category)

x_1 = mean years of education of parents

x_2 = home ownership (0 = no, 1 = yes)

x_3 = number of items (0, 1, 2, 3)

x_4 = number of siblings (0 to 9)

x_5 = two parents (0 = no, 1 = yes)

x_6 = age (negative of birth year)

x_7 = second grade standard vocabulary score

x_8 = 1 if entered and remained in Project Concern, otherwise 0

x_9 = 1 if entered Project Concern but finished schooling in Hartford city school, otherwise 0

x_{10} = 1 if never in Project Concern and finished in non-city school, otherwise 0

x^{11} = 1 if never in Project Concern and finished in city school, otherwise 0

(this dummy variable has an automatic regression coefficient of 0 to prevent over-determination)

To estimate the high school drop-out rate for control group entrants, we must combine the estimates for control group entrants who remained in Hartford city schools (x_{11}) and for control group entrants who finished in non-city schools (x_{10}). The estimate for those who remained in Hartford city schools is:

$$\begin{array}{ccccc} b_1x_1 & b_2x_2 & b_3x_3 & b_4x_4 & b_5x_5 \end{array}$$

$$D = (-.003 \times 10.9) + (0.106 \times .41) + (-.074 \times 2.14) + (.008 \times 4.35) + (-.189 \times .37)$$

$$\begin{array}{cccc} b_6x_6 & & b_7x_7 & b_8x_8 \quad b_9x_9 \end{array}$$
$$+ (-.011 \times -1960.5) + (-.004 \times 46.7) + (-.201 \times 0) + (.050 \times 0)$$

$$\begin{array}{cc} b_{10}x_{10} & b_{11}x_{11} \end{array}$$
$$+ (-.087 \times 0) + (0 \times 1) - 20.863 = .334$$

To estimate the drop-out rate for control group members who left the city schools, we change the x_{10} term to (-0.87 x 1) and the x_{11} term to (0 x 0); thus,

$$D = .334 - .087 = .247$$

To estimate the drop-out rate of all control group entrants, we compute the weighted average of these two estimates. Since 45 percent of the sample are control group entrants who remained in city schools, and 8 percent are control group entrants who transferred to non-city schools, the estimate is:

$$D = \frac{(.45)(.334)+(.08)(.247)}{(.45+.08)} = .32$$

Similarly, the estimates for all Project Concern entrants is the weighted average of the 24 percent of the sample who dropped out of the experiment and who had a drop-out rate of .334 + 0.050 = .384, and the 23 percent who remained in the program, with a drop-out rate of .334 - .201 = .133:

$$D = \frac{(.24)(.384)+(.23)(.133)}{(.24+.23)} = .26$$

uses this equation and 9 others to show the expected percentage of students at each level of educational attainment in what we can call a "simulated cross-tabulation." Table B.3 shows the exact calculations needed to estimate the high school drop-out rates for statistically matched groups of Project Concern entrants and control group entrants.

THE 'EXPERIMENTAL ASSIGNMENT' METHOD

We also have a second, more conservative approach available, the "experimental assignment" method. Here we simply compare every student who was selected to go into Project Concern in 1966 to every student in the control group; similarly, every student who was randomly selected to participated in Project Concern in 1968 and 1969 is compared to every student in the randomly selected control group; and finally, every student who entered the program "voluntarily" is compared to every child a family attempted to enroll in the program. When this is done, differences in motivation should be minimized, especially for the two randomly selected groups. The advantage of this approach is that it preserves all the original random assignment in 1966 and 1968-69. Its disadvantage is that the Project Concern/Control differences will almost certainly underestimate the true program effect.

In Table B.4, we show the educational attainment of respondents divided into three substudies: the 1966 experiment, our constructed retrospective experiment of randomly sampled Project Concern students in 1968 and 1969, and students who voluntarily entered Project Concern. The first panel of the table is for males; the first row shows their simple (uncontrolled) mean educational attainment. The first 3 columns show the mean educational attainment of Project Concern students selected in 1966, the attainment of the 1966 control group, and the difference between the two. Columns 4 through 7 show the educational attainment of randomly sampled Project Concern candidates who refused to enter the program, a control group of students randomly selected from the same grades from

Table B.4

EXPERIMENTAL ASSIGNMENT ANALYSIS EDUCATIONAL ATTAINMENT OF STUDENTS ASSIGNED TO PROJECT CONCERN AND TO CONTROL GROUP, WITH AND WITHOUT BACKGROUND CONTROLS, BY SEX

	1966 Experiment Substudy			1968-69 Experiment Substudy				Volunteer Substudy			Overall Effect
	PC (%)	Control (%)	Difference	PC (%)	Refused (%)	Control (%)	Difference	PC (%)	Control (%)	Difference	
Males											
Uncontrolled	12.7	12.1	(.57)	11.9	12.3	11.8	(.30)	12.3	11.3	(.98)	
Controlled	12.4	11.6	(.78)	12.0	12.4	12.0	(.20)	12.4	11.4	(1.01)	(.42)*
(percentage of cases)	(12)	(9)		(14)	(12)	(30)		(16)	(8)		
Females											
Uncontrolled	12.5	12.7	(-.19)	12.5	12.7	11.8	(.80)	12.1	12.2	(-.13)	
Controlled	12.1	11.7	(.39)	12.5	12.4	12.2	(.19)	12.1	12.3	(-.18)	(.12)
(percentage of cases)	(9)	(9)		(13)	(11)	(31)		(19)	(9)		

NOTE: Students selected for Project Concern have completed significantly more years of school; this is true for both sexes combined and for males alone.
*p less than .05, one-tailed (t=1.96)

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the same elementary schools, and the difference between the control group and the combined project concern students and refusers. Columns 8 through 10 show the attainment of Project Concern students who entered the program in what we consider a voluntary manner, either because they were randomly sampled in 1970-71, when the recruitment effort was less and hence the refusal rate higher, or because we could not find them on any list of randomly sampled students in Project Concern files. These volunteers are then compared to a control group of students who attempted to enter the program and the difference between the two groups is shown in Column 10. The second row of the table shows the expected educational attainment for each group of students derived from a regression equation in which age, second grade test score, and the seven family background variables are controlled. The data for males shows a strong positive desegregation effect in the voluntary substudy and in the 1966 experiment, which is the most rigorous of the designs, and weaker effects in the 1968-69 design, the design with the strongest bias in the data. When regression equations are used to control on background variables, the Project Concern effect in the 1966 experiment actually becomes slightly stronger, and the effects of Project Concern in the voluntary study remains very strong. The effect of selection for Project Concern in the 1968-69 retrospective experiment drops from 0.30 years of schooling to 0.20 years. This drop was to be expected since this control group has lower socioeconomic status than the students selected for Project Concern.

In a separate regression equation, the males selected for Project Concern in all three substudies were pooled and three control groups pooled; with the standard control variables, the estimated effect of being selected by Project Concern is 0.42 years of schooling, which is statistically significant with a one-tailed test, $p < .05$ ($t = 1.96$). This value is shown in parentheses in the far right column of the second row. (Because program assignment is not unbiased, the control variables do affect the estimate, raising the possibility that our effects are overestimated due to inadequate control variables; however, the effect of the controls is to only reduce the apparent program effect from .52 to .42, so it

does not seem likely that either new or improved control variables would reduce the estimate a great deal more.[1]

In one other regression equation (data not shown in the table), we found that the pooled group of students selected for Project Concern has a high school drop-out rate of 22 percent, compared to 36 percent for those not assigned to the program, again net of the seven control variables; the effect is significant, p less than 0.01, one-tailed (t = 2.37).

In the lower part of Table B.4, we see a similar analysis for females which shows that Project Concern produced only a weak increase in mean educational attainment. The first row, showing data with no controls, indicates that in the 1966 substudy and the voluntary substudy, the control groups had higher educational attainment than did the students selected for Project Concern. The only apparent positive effect in the 1968-69 study, where the females selected for Project Concern had 0.8 more years of schooling than their control group. The second row shows the expected level of schooling for each group derived from the regression equation with age, second grade test scores, and family background variables controlled. Here we see that the strong positive effect of Project Concern which appears in the 1968-69 retrospective experiment is largely explained by the background differences between students. The apparent effect of Project Concern drops from 0.8 years to 0.19 years; since our equation does not include all reasonable control variables (and those present are imperfectly measured), the fact that the effect declines to one-quarter of its original size strongly suggests that with a more complete set of better measured control variables the effect might very well become zero. The introduction of controls reverses the apparent effect in the 1966 experiment,

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[1]The 0.42 effect is partly inflated because of the inexplicably high attainment of the students whose parents refused to volunteer them for the program in 1968-69. If we assume that their attainment, 12.4 years, is inflated by sampling error and arbitrarily reduce it to 12.0, equal to the attainment of both the Project Concern group and control group for the 1968-69 substudy, we would reduce the overall apparent effect of Project Concern across all three substudies from 0.42 to 0.33.

showing a noticeable effect apparently favoring Project Concern students, but introducing controls has no impact upon the voluntary study which still shows a slight negative effect of Project Concern. The regression equation pooling all three substudies (again reported in the second row of the last column) shows an overall impact of assignment to Project Concern of only 0.12.

NONRESPONSE BIAS

The educational attainment effects of Project Concern are exaggerated in the survey due to a bias of nonresponse. Pooling males and females together, we find that all students who ever entered Project Concern have a 27 percent high school drop-out rate compared to a 42 percent drop-out rate for students who were either in the control group or refused the opportunity to participate in 1968-69. However, about one-fourth of this difference is removed when instead of using data from the responding members of the sample we used the entire population (high school graduation data on non-participants comes from school records). There we find that non-participants in Project Concern have a 46 percent high school drop-out rate while participants have a 35 percent drop-out rate. Since this 11 percent decrease in the drop-out rate is only three-fourths as large as the difference (42 percent - 27 percent = 15 percent) found in the survey sample, we conclude that sample bias causes us to overestimate the effect of desegregation on the reduction of the drop-out rate by one-fourth.

Table B.5

EXPERIMENT ENTRANTS ANALYSIS
DELINQUENCY, PERCEIVED DISCRIMINATION, AND CONTACT WITH WHITES OF PROJECT CONCERN ENTRANTS AND CONTROL GROUP, WITH AND WITHOUT BACKGROUND CONTROLS, BY SEX

	Project Concern Entrants	Control Group Entrants
Males		
Perceived college discrimination (%)		
Uncontrolled	50	55
Controlled	48	57
Perceived discrimination generally (scale)		
Uncontrolled	7	25
Controlled	6.[a]	26
Police/violence (scale)		
Uncontrolled	.25	.31
Controlled	.26	.31
Contact with whites (scale)		
Uncontrolled	.55	.46
Controlled	.57[a]	.46
Moved into white residential area (scale)		
Uncontrolled	.47	.39
Controlled	.49	.39
Had few friends in college		
Uncontrolled	21	32
Controlled	25	32
Females		
Perceived college discrimination (%)		
Uncontrolled	16	15
Controlled	19	16
Perceived discrimination generally (scale)		
Uncontrolled	.50	.52
Controlled	.48	.50
Police/violence (scale)		
Uncontrolled	.10	.13
Controlled	.14	.12
Bore child before age 18 (%)		
Uncontrolled	18	26
Controlled	20	24
Contact with whites (scale)		
Uncontrolled	.43	.42
Controlled	.44	.40
Moved into white residential area (scale)		
Uncontrolled	.52	.42
Controlled	.55[a]	.39
Had few friends in college		
Uncontrolled	18	35
Controlled	18.[a]	34

NOTE: Controlling on family background, age and test scores.
[a] t less than .05, one-tailed test.

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Table B.6

EXPERIMENTAL ASSIGNMENT ANALYSIS
DELINQUENCY, PERCEIVED DISCRIMINATION, AND CONTACT WITH WHITES OF MALES ASSIGNED TO PROJECT CONCERN AND TO THE CONTROL GROUP, WITH AND WITHOUT BACKGROUND CONTROLS

	1966 Experiment Subetudy			1968-69 Experiment Subetudy				Volunteer Subetudy			Overall Effect
	PC	Control	Difference	PC	Refused	Control	Difference	PC	Control	Difference	
Perceived college discrimination (%)											
Uncontrolled	0	12	(-12)	14	30	28	(-7)	7	24	(-17)	
Controlled	0	8	(-14)	16	31	30	(-8)	11	23	(-12)	(-15)
Perceived discrimination generally (scale)											
Uncontrolled	.55	.51	(.04)	.48	.69	.53	(.05)	.47	.52	(-.05)	
Controlled	.54	.54	(0)	.46	.67	.54	(.02)	.45	.56	(-.11)	(-.01)
Police/violence (scale)											
Uncontrolled	.34	.36	(-.02)	.25	.30	.41	(-.14)	.18	.29	(-.11)	
Controlled	.31	.32	(-.01)	.25	.31	.29	(-.01)	.22	.39	(-.16)	(-.04)
Contact with whites (scale)											
Uncontrolled	.42	.50	(-.08)	.55	.45	.46	(.04)	.65	.41	(.24)	
Controlled	.40	.44	(-.04)	.57	.48	.47	(.06)	.68	.37	(.31)	(.09)
Moved into white residential area (scale)											
Uncontrolled	.38	.54	(-.16)	.58	.31	.40	(.06)	.44	.35	(.09)	
Controlled	.34	.41	(-.07)	.64	.36	.41	(.10)	.49	.25	(.24)	(.06)
Had few friends in college (%)											
Uncontrolled	13	23	(-10)	27	33	26	(.04)	20	47	(-27)	
Controlled	13	20	(-7)	30	36	24	(.09)	23	39	(-16)	(-.01)
Percentage of cases	12	9		14	12	30		16	8		

Table B.7

EXPERIMENTAL ASSIGNMENT ANALYSIS
DELINQUENCY, PERCEIVED DISCRIMINATION, AND CONTACT WITH WHITES OF FEMALES ASSIGNED TO PROJECT CONCERN AND TO THE CONTROL GROUP, WITH AND WITHOUT BACKGROUND CONTROLS

	1966 Experiment Substudy			1968-69 Experiment Substudy				Volunteer Substudy			Overall Effect
	PC	Control	Difference	PC	Refused	Control	Difference	PC	Control	Difference	
Perceived college discrimination (%)											
Uncontrolled	.09	.50	(-.41)	.11	.10	.09	(.01)	.22	.12	(-.10)	
Controlled	.07	.47	(-.40)	.12	.06	.11	(-.02)	21	.12	(-.09)	(-.07)
Perceived discrimination generally (scale)											
Uncontrolled	.36	.48	(-.12)	.56	.54	.49	(.06)	.51	.56	(-.05)	
Controlled	.34	.41	(-.07)	.58	.56	.50	(.07)	.53	.51	(.02)	(.02)
Police/violence (scale)											
Uncontrolled	.11	.09	(.02)	.10	.14	.13	(-.01)	.11	.25	(-.14)	
Controlled	.08	.09	(-.01)	.09	.07	.06	(.02)	.13	.22	(-.09)	(.00)
Bore child before age 18 (%)											
Uncontrolled	21	14	(7)	15	7	35	(-24)	17	23	(-6)	
Controlled	19	21	(-2)	15	11	27	(-14)	19	27	(-8)	(-8)
Contact with whites (scale)											
Uncontrolled	.67	.51	(.16)	.43	.32	.44	(-.07)	.33	.29	(.04)	
Controlled	.58	.39	(.19)	.46	.30	.48	(-.10)	.36	.31	(.05)	(-.01)
Moved into white residential area (scale)											
Uncontrolled	.74	.30	(.34)	.42	.31	.48	(-.11)	.42	.42	(.00)	
Controlled	.69	.23	(.46)	.42	.28	.53	(-.18)	.46	.43	(.03)	(.05)
Had few friends in college (%)											
Uncontrolled	0	22	(-22)	22	23	45	(-23)	13	48	(-35)	
Controlled	0	14	(-14)	28	22	48	(-23)	13	50	(-37)	(-.17)
Percentage of cases	9	9		13	11	31		19	9		

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ESTIMATING THE EFFECT OF PROJECT CONCERN ON EDUCATIONAL ATTAINMENT

It is difficult to arrive at an estimate of the effect of desegregation on male achievement. If we assume no self-selection bias, then we would conclude that desegregation would raise educational attainment to the level shown for Project Concern completers in Tables 1 and 2. This is 0.8 years higher than the control group. But this is an overestimate. At the opposite extreme, estimates based on the differences shown between Project Concern entrants and control group entrants (0.3 years) or from the experimental assignment analysis of the seven Experimental assignment categories (0.42 years) are both too low, since they assume those who left the program early (or never entered) lost nothing when they dropped out of (or never entered) Project Concern. If we assume an effect of 0.5 years, above the two low estimates of 0.3 and 0.42 years (and below the value obtained in Table 1 of 0.8 years) and construct a table estimating the distribution of educational attainment for the treatment and control groups, we are led to conclude that Project Concern decreased the male high school drop-out rate approximately from 32 percent to 19 percent, and increased the number of males receiving two or more years of college from perhaps 21 percent to perhaps 32 percent.[2] These estimates are based on a host of assumptions, any of which could be modified; but any reasonable set of assumptions will show non-trivial effects.

SELECTION BIAS IN EFFECTS ON OTHER OUTCOMES

The "experimental entrants" analysis of the other outcomes of desegregation appears in Table B.5; the "experimental assignment" analysis appears in Tables B.6 and B.7. Let us examine each

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[2]We assume one-third of those now in college have not yet but will receive two years of schooling. This is 5 percent of the control group and 8 percent of the students in Project Concern.

dependent variable in turn. Table B.5 shows that Project Concern males perceive less discrimination in non-college life than does control group. The evidence from the experimental assignment analysis of perception of college and non-college discrimination is mixed but encouraging. In Table B.6, we see a clear effect favoring males assigned to Project Concern for the voluntary substudy, but not for the 1966 substudy. Data for the 1968-69 substudy is ambiguous, since Project Concern participants have low perceptions of discrimination but Project refusers have a very high rate (perhaps having learned from their parents the suspiciousness that prompted their parents to refuse to enroll them in the Project 15 years earlier?). The analysis presented in the body of this Report found that desegregated school experience had no effect on women's perception of discrimination; Tables B.5 and B.7 agree.

There is a sizeable difference in the police violence scale scores of males who remained in Project Concern and those who dropped out or returned to city schools, suggesting a strong self-selection bias in the analysis. However, Table B.5 shows that when Project Concern drop-outs are included with program completers, there is still a difference favoring Project Concern male students: Project Concern students score 26 on this scale compared to 31 for the control group, after social class, age, and second grade achievement scores have been entered as controls. This difference is not significant (p less than 0.07, one-tailed). Despite this, we believe that desegregation probably does reduce difficulties with the police and with violence; a 5 point reduction is one-fifth of the control group's 31 point score, and we think that with a larger study a significant effect would have appeared.

Table B.6 indicates that after controls for family background, age, and early test scores, there is a very weak program effect on the male police/violence scores in the 1966 experiment and the 1968-69 substudy and a very strong effect for the voluntary substudy. The overall difference between the students assigned to Project Concern, including refusers, and those assigned to control status is 0.04, a result whose magnitude is consistent with the .05 effect in Table B.5.

If we momentarily suspend our reservations about these nonsignificant findings, we have another difficulty; what estimate shall we make of the effect of desegregation on males' troubles with the police and with violence? The difference between the Project Concern completers and the control group who finished in city schools in Table 8, 15 points, is clearly an overestimate, but at the same time the 5 point estimate derived from including all Project Concern drop-outs and the 4 point difference in Table B.6 are no doubt too conservative.

In the body of the Report, we concluded that desegregation had no effect on female difficulties with police and aggression; the data in Tables B.5 and B.7 also show no effect.

The seventh and eighth rows of the bottom panel of Table B.5 show that female Project Concern entrants have a lower rate of teenage childbearing than do control group entrants--a rate of 20 percent for the Project Concern group versus 24 percent for the control group. In Table B.7, we find (in the far right hand column) a significant 8 percent reduction in childbirth for students initially assigned to Project Concern (p less than 0.05, one-tailed, t = 1.67).

Table B.5 also shows data on various measures of interracial relations. For both males and females, having participated in Project Concern is associated with higher rates of contact with whites, greater likelihood of househunting in white neighborhoods, and lower rates of complaining about lack of friends in college.

Two of the findings in Table B.5 are significant: effects on the "contact with whites" scale for males, and the "moved into white residential areas" scale for females. In Tables B.6 and B.7, if we look at all six male outcome variables and at four female outcome variables (childbirth before age 18, contact with whites, moving into white residential areas, and having friends in college), we find that 22 of the 30 differences are in the predicted direction. One variable, perceived discrimination generally for males, shows a difference in the expected direction in only one substudy; six other outcomes show effects in the predicted direction in two substudies, and in three cases (trouble with

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police or violence and perceived college discrimination for males, and early childbearing for females), the results are as predicted in all three substudies. We also are encouraged by the fact that the results when the family background and second grade test scores are controlled show a pattern which is very similar to that obtained before the control variables are introduced. This suggests that the control variables have relatively weak effects and are not strongly correlated with the design categories. This, in turn, implies that problems of multicollinearity and regression effects are not of great importance.

We conclude that the following apparent effects of desegregation on minority students show one or more statistically significant effects after self-selection bias is removed, and therefore cannot be explained as the results of self-selection bias:

- Male high school drop-out rates
- Male college retention rates
- Male perception of college discrimination
- Male contact with whites
- Female childbearing before age 18
- Female househunting in predominately white neighborhoods
- Female complaints of few friends in college

The effect of desegregation on the male police/violence scale remains less definite, but the weight of the evidence is probably in favor of an effect.

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